THE INFLUENCE OF LECTURER COMPETENCIES AND ACADEMIC QUALIFICATIONS OF STUDENT LEARNING OUTCOMES WITH TEACHING MOTIVATION AS INTERVENING VARIABLES

(Case Study at LP3I Medan Polytechnic Students)

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Abstract

The purpose of National Education is to create the qualified human beings. In order to improve and produce human resources, it cannot be separated from the performance of all lecturers as the core of the teaching and learning process. Lecturers are the main actors and key points in the entire educational process especially in higher Education. The purpose of this study is to determine the effect of Lecturer Competencies, Academic Qualifications and Teaching Motivation against Student Learning Outcomes at LP3I Medan Polytechnic. This study was conducted in LP3I Medan Polytechnic of 45 respondents. This study uses quantitative descriptive method. Data analysis in this study uses multiple linear regression analysis. The results show that partially the Lecturer Competencies variables and Academic Qualifications variables influence the Student Learning Outcomes and simultaneously both have a significant effect on Student Learning Outcomes. Meanwhile, the Lecturer Competencies variable partially has a significant influence on teaching motivation, while the Academic Qualifications variable has no influence on teaching motivation. And simultaneously Lecturer Competencies variables and Academic Qualifications significantly influence teaching motivation. Furthermore, intervening variables testing of teaching motivation can mediate the influence of Lecturer Competencies on Student Learning Outcomes. While testing intervening variables of teaching motivation cannot mediate the influence of Academic Qualifications on Student Learning Outcomes.

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Key-word: Lecturer Competencies, Academic Qualifications, Teaching Motivation, Learning Outcomes

1. Introduction

National education aims to create qualified human beings. Vocational education as part of the national education system has a strategic role to create trained and qualified human resources. In an effort to improve and produce human resources, it cannot be separated from the performance of all lecturers as the core of the teaching and learning process. Lecturers are responsible for the teaching and learning process; therefore, in an effort to improve the quality of higher education, lecturers are the main actors and key points in the whole educational process, especially in college.

Indonesian Republik Laws No. 14 of 2005 states that lecturers are professional educators and scientists who have the task to transform, develop, and disseminate science, technology, and art through education, research, and community service. Based on the above understanding, the lecturer has a role as the main actors of the entire educational process. The important role of lecturers in their responsibility towards teaching learning process (PBM) is to improve the quality of education, especially in higher education.
To carry out the functions, roles, tasks and responsibilities required competence lecturers, qualifications and highly motivated. The main factor of the low quality of education is the condition of lecturers whose qualifications are not appropriate or teaching is not accordance with their expertise. This is an important concern in order to improve a student learning outcome which is produce qualified human resources in accordance with the ideals of national education. National education problems that involve two-way interaction between educators and students become the basis of attention for the development of education. Therefore, the research refers to assess how much the involvement of lecturers’ influence on Student Learning Outcomes in the LP3I Medan Polytechnic which is a Vocational College that has a goal in preparing a trained and experted worker, ready for work and global competitiveness.

Based on the previous description, the general objective of this research is to determine the effect of Lecturer Competencies, Academic Qualifications on Student Learning Outcomes with teaching motivation as an intervening variable in the LP3I Medan Polytechnic. The benefits to be achieved in this study are: (1) the results of this study are expected to be used as a reference for improvement and development of the learning process at the LP3I Medan Polytechnic, (2) the results of this study can be used as input and consideration as a benchmark for development in the process learning and lectures, (3) the results of this study are used as reference material in the recruitment of lecturers at the LP3I Medan Polytechnic, and (4) can be used as a reference indicator of the influence of Lecturer Competencies, Academic Qualifications, and teaching motivation on Student Learning Outcomes at the LP3I Medan Polytechnic.

2. Literature Review

Learning Outcomes

Evidence that someone has learned is the change in behavior of that person, for example from not knowing to knowing, and not understanding to understanding (Hamalik, 2010). While Bloom in Suprijono (2010), said that "learning outcomes include cognitive abilities, affective". The cognitive domain is knowledge, comprehension, application, analysis, synthesis and evaluation. Affective domain is receiving, responding, valuing, organization, characterization. Psychomotor also includes productive, technical, physical, social, managerial, and intellectual skills. Based on the explanation above, it can be concluded that the results of learning are the results obtained by students in the form of knowledge, understanding, habits, appreciation, emotional, social relations, physical, ethical / manners, and attitudes after participating in learning indicated in the scoring of the results evaluation that has been done.

Lecturer Competencies

The meaning of competence is the combination of mastery of knowledge, scores, skills, and attitudes that is reflected through the habit of thinking and acting to carry out their assignments (Sagala, 2009). In the Law of the Republic of Indonesia number 14 of 2005 Article 1 paragraph 1, "Lecturers are professional educators and scientists whose main task is to transform, develop and disseminate science and technology and arts through education, research and community service".

Lecturer Competencies in accordance with Article 10 of the Law of the Republic of Indonesia number 14 of 2005 include pedagogical competencies, social competencies, personal competencies, and professional competencies obtained through professional education. The four competencies as follows:

1. Pedagogical competence is the ability of educators to manage learning, at least covering: (a) Understanding of insight or educational foundation, (b) Understanding of students (c) Developing curriculum / syllabus, (d) Designing learning (e) implementing teaching and dialogue learning, (f) The use of learning technology, (g) evaluate process and learning outcomes, (h) can be a role model for students and the community.

2. Personality competence: (a) Noble character, (b) Arif and also, (c) Solid, (d) Authoritative, (e) Stable, (f) Adult, (g) Honest, (h) can be an example for students and the community(i) objectively evaluating their own performance, and (j) Self-development independently and simultaneously.

3. Social competence is teachers ability as part of the community, at least includes: (a) oral, written, and / or sign communication, (b) Functional use of communication and information technology, (c) Effective association with students, education staff, fellow educators, leaders of the education unit, parents / educational staff, (d) A polite association with the surrounding communities.
community in accordance with applicable norms and value systems, (e) Applying the spirit of togetherness and the principles of brotherhood.

4. Professional competence is the ability of educators to master the fields of science, technology, and/or art of at least mastery: (a) Extensive and in-depth subject matter in accordance with the standard content of the educational unit program, subjects, and/or groups of subjects they support. (b) The concepts and methods of scientific, technological, or artistic disciplines that are conceptually appropriate and overshadow with the education unit program, subjects, and/or groups of subjects they support.

Academic Qualifications

Based on Article 45 of the Law of the Republic of Indonesia number 14 of 2005 about Teachers and Lecturers concerning: Lecturers are required to have Academic Qualifications, educator certificates, competencies, physically and mentally healthy, and meet other qualifications required by the tertiary institution where they work, and have the ability to achievemental educational goals. From article 45 explained in more detail about the Academic Qualifications of lecturers, and clearly explained in the Act on teachers and lecturers in article 46 paragraph 1 to 3 that is, lecturers must have minimum Academic Qualifications:

a. Postgraduate programs accredited according to their field of expertise
b. Graduates of master programs for diploma/undergraduate programs
c. Graduates of doctoral programs for postgraduate programs.
d. Everyone who has extraordinary achievements can be appointed as a lecturer

Teaching Motivation

Motivation is as "the process of intensity, direction, and perseverance of an individual in achieving goals" (Robbins, 2008). The process of one's performance, motivation is needed as a means of achieving desired goals. After the performance targets are right, and then the impact of one's competence can be seen.

The positive attitude shown by teachers from teaching materials presented to students and the use of teaching methods can influence students' motivation and attitudes towards the interest in teaching materials. Uno said if students feel or really see such positive expressions or attitudes, students will tend to behave positively. The results strongly support the success of the teaching process (Yuliani, 2010). From the above understanding, the conclusion of motivation is the motivation that originates in oneself due to the desire to achieve hopes and ideals.

3. Methodology

This research was conducted at the LP3I Medan Polytechnic. LP3I Medan Polytechnic has two branches as the location of this research:

a. LP3I Medan Polytechnic located on Jl. SeiSerayu No.48D, Babura Sunggal, Medan Sunggal, Medan City, North Sumatra 20153.
b. LP3I Medan Polytechnic located on Jl. Platina Raya No.8 ABC, TitiPapan, Medan Marelan, Medan City, North Sumatra 20243.

This study uses quantitative descriptive method. Quantitative methods are research methods that are based on the philosophy of positivism, used to examine populations or specific samples, data collecting use research instruments, analyzing quantitative/statistical data, with the aim of testing established hypotheses. Descriptive research is research conducted to determine the value of independent variables, either one or more variables (independent) without making comparisons, or connecting with other variables (Sugiyono, 2016, p13).

This study involved 45 respondents from lecturers at LP3I Medan Polytechnic. Questionnaires were distributed from March to April 2019. Research data collection used questionnaires that had previously been tested for validity and reliability so that the questionnaires distributed were valid, relevant and reliable as data collectors. Validity test is used to measure the validity of a questionnaire. A questionnaire is valid if the questions on the questionnaire are able to reveal something that is measured by the questionnaire (Ghozali, 2016, p52).

While the reliability test is a tool to measure questionnaire that is an indicator of a variable or construct. A questionnaire is reliable if the answer to a statement is consistent or stable from time to time (Ghozali, 2016,
Data analysis methods in this study used descriptive statistics, multiple regression and Path analysis. Systematically the study examines the effect of the independent variable (X) on the dependent variable (Y) through the intervening variable (Z). Models in this research:

![Figure 1. Research Model](image)

Based on the research model above, the hypotheses in this study are:
- **H1**: There is an influence of Lecturer Competencies and Academic Qualifications on Student Learning Outcomes Partially
- **H2**: There is an influence of Lecturer Competencies and Academic Qualifications on Student Learning Outcomes Simultaneously
- **H3**: There is an Influence of Lecturer Competencies and Academic Qualifications on Teaching Motivation Partially
- **H4**: There is an Influence of Lecturer Competencies and Academic Qualifications on Simultaneous Teaching Motivation
- **H5**: There is an influence of Lecturer Competencies and Academic Qualifications on Student Learning Outcomes with Teaching Motivation as Intervening Variables.

### 4. Result and Discussion

**Description of Results**

The data used in this study are primary data in the form of questionnaires and data on learning outcomes obtained directly from the Academic Administration of the LP3I Medan Polytechnic in 2 Branches. The number of observations in this study was 32 observations with the largest maximum value in the Lecturer Competencies variable (X1). While the smallest minimum value in this study was also in the Academic Qualifications variable (X2). The average for the Lecturer Competencies variable (X1) is 109.15 and for the Academic Qualifications variable (X2) has an average value of 1.96 while the Teaching Motivation variable (Z) has an average value of 38.21 and the Learning Outcomes (Y) has an average of 3.31.

**Classic Assumption Test**

- **Normality Test**
  
  Residual normality test is carried out by Kolmogrov-Smirnov (K-S) non-parametic statistical test. Kolmogrov-Smirnov value (K-S) amounted to 0.999 and the significance at 0.445 was greater than α (0.05). Then it can be concluded that the research data is normally distributed.

<table>
<thead>
<tr>
<th>One-Sample Kolmogorov-Smirnov Test</th>
<th>Unstandardized Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>32</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.445</td>
</tr>
</tbody>
</table>

- **Validity Test**
  
  Validity test is conducted to determine the validity or suitability of the questionnaire used by researchers to obtain data from respondents or research samples. The validity test of Pearson product moment correlation uses the principle of correlating or linking each item or problem score with the total score obtained from respondents' answers to the questionnaire. The basis for decision making in this test by comparing the value of sig. (2-tailed) with a probability of 0.05, i.e. if the value of sig. (2-tailed) <0.05 and Pearson correlation is positive, and then the questionnaire items are valid.

<table>
<thead>
<tr>
<th>Item</th>
<th>Lecturer Competencies (X1)</th>
<th>Teaching Motivation (Z)</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedagogic</td>
<td>Professional</td>
<td>Social</td>
<td>Personality</td>
</tr>
</tbody>
</table>
Hygiene questionnaire, known as the confidence level test. Reliability test can be done together on all items in the research.

Reliability test is done after the validity test is carried out and valid results are obtained. This is done in order to obtain a research questionnaire that can truly be trusted as a data collection tool. This test is also known as the confidence level test. Reliability test can be done together on all items in the research questionnaire, on the basis of decision making as follow:

i. If the Cronb\'s Alpha value > 0.60 then the questionnaire or questionnaire is reliable or consistent

ii. If the Cronb\'s Alpha value <0.60 then the questionnaire or questionnaire is unreliable or inconsistent consistently

<table>
<thead>
<tr>
<th>Item</th>
<th>Pedagogic All</th>
<th>Pedagogic Per-Item</th>
<th>Pedagogic Professional All</th>
<th>Pedagogic Professional Per-Item</th>
<th>Pedagogic Social All</th>
<th>Pedagogic Social Per-Item</th>
<th>Social Personality All</th>
<th>Social Personality Per-Item</th>
<th>Teaching Motivation (X) All</th>
<th>Teaching Motivation (X) Per-Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.747</td>
<td>0.754</td>
<td>0.775</td>
<td>0.793</td>
<td>0.602</td>
<td>0.757</td>
<td>0.663</td>
<td>0.760</td>
<td>0.727</td>
<td>0.734</td>
</tr>
<tr>
<td>2</td>
<td>0.749</td>
<td>0.783</td>
<td>0.720</td>
<td>0.786</td>
<td>0.746</td>
<td>0.746</td>
<td>0.763</td>
<td>0.760</td>
<td>0.726</td>
<td>0.731</td>
</tr>
<tr>
<td>3</td>
<td>0.724</td>
<td>0.760</td>
<td>0.838</td>
<td>0.746</td>
<td>0.725</td>
<td>0.725</td>
<td>0.695</td>
<td>0.749</td>
<td>0.663</td>
<td>0.749</td>
</tr>
<tr>
<td>4</td>
<td>0.742</td>
<td>0.757</td>
<td></td>
<td>0.725</td>
<td>0.749</td>
<td>0.749</td>
<td>0.663</td>
<td>0.749</td>
<td>0.663</td>
<td>0.749</td>
</tr>
<tr>
<td>5</td>
<td>0.737</td>
<td>0.710</td>
<td></td>
<td>0.749</td>
<td>0.749</td>
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<tr>
<td>6</td>
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<td></td>
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<td></td>
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<td>7</td>
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<tr>
<td>8</td>
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<td></td>
<td>0.711</td>
<td>0.711</td>
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<td>0.711</td>
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<tr>
<td>9</td>
<td>0.727</td>
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<td></td>
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<td>0.703</td>
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<td>0.703</td>
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<td>0.703</td>
</tr>
<tr>
<td>10</td>
<td>0.738</td>
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<td></td>
<td></td>
<td>0.716</td>
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<td>0.716</td>
<td>0.716</td>
<td>0.716</td>
<td>0.716</td>
</tr>
<tr>
<td>11</td>
<td>0.743</td>
<td></td>
<td></td>
<td></td>
<td>0.716</td>
<td>0.716</td>
<td>0.716</td>
<td>0.716</td>
<td>0.716</td>
<td>0.716</td>
</tr>
</tbody>
</table>

Hypothesis Test

a  There is an Influence of Lecturer Competencies and Academic Qualifications on Student Learning Outcomes both Partially and Simultaneously

The coefficient of determination analysis is performed to determine the ability of the independent variable influences the dependent variable.

<table>
<thead>
<tr>
<th>Mode</th>
<th>R</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.991</td>
<td>.982</td>
</tr>
</tbody>
</table>

Based on the model summary table, show that the R Square Value of 0.982. It means that 98.2% of the Learning Outcomes variable can be explained by Lecturer Competencies and Academic Qualifications. The remaining 1.8% is explained by other variables outside the study.

H₁ : There is an influence of Lecturer Competencies and Academic Qualifications on Student Learning OutcomesPartially

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients B</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>Descriptions</th>
</tr>
</thead>
</table>

Table 3 Reliability Test

Table 4. Model Summary

Table 5.t Coefficient Test
The regression equation for this hypothesis is:
\[ Y = -1.035 + 0.938X_1 + 0.092X_2 \]

The test results obtained that partially the Lecturer Competencies variable (X1) and Academic Qualifications variable (X2) significantly influence Student Learning Outcomes (Y).

**H2**: There is an effect of Lecturer Competencies and Academic Qualifications on Student Learning Outcomes Simultaneously

![Table 6. F ANOVA Test](image)

The test results obtained that simultaneously the Lecturer Competencies Variable (X1) and Academic Qualifications variable (X2) significantly influence Student Learning Outcomes (Y).

**b** There is an Influence of Lecturer Competencies and Academic Qualifications on Teaching Motivation both Partially and Simultaneously

The coefficient of determination analysis is performed to determine the ability of the independent variable influences the dependent variable.

![Table 7. Model Summary](image)

Based on the model summary obtained that R Square value of 0.746. This means that 74.6% of the variable Teaching Motivation can be explained by Lecturer Competencies and Academic Qualifications. The remaining 25.4% is explained by other variables outside the study.

**H3**: There is an influence of Lecturer Competencies and Academic Qualifications on Teaching Motivation Partially

![Table 8. t. Coefficient Test](image)

The regression equation for this hypothesis is:
\[ Z = -1.018 + 0.780X_1 - 0.068X_2 \]

The results are obtained that partially the Lecturer Competencies variable (X1) has a significant influence on Teaching Motivation (Z), while the Academic Qualifications variable (X2) has no influence Teaching Motivation (Z).

**H4**: There is an influence of Lecturer Competencies and Academic Qualifications on Simultaneous Teaching Motivation

![Table 9 F ANOVA Test](image)

The test results obtained that simultaneously the Lecturer Competency (X1) and Academic Qualifications (X2) variables significantly influence Teaching Motivation (Z).

**c** There is an Influence of Lecturer Competencies and Academic Qualifications on Student Learning Outcomes through Teaching Motivation
The total influence of Lecturer Competencies (X1) on Learning Outcomes (Y) through Teaching Motivation (Z) is 0.521. The direct influence of Lecturer Competencies (X1) on Learning Outcomes (Y) was 0.002, while the indirect influence of Lecturer Competencies (X1) on Learning Outcomes (Y) through Teaching Motivation (Z) was 0.519. The direct influence obtained is smaller than the indirect influence, thus it is known that Teaching Motivation mediates the influence of Lecturer Competencies (X1) on Learning Outcomes (Y).

The total influence of Academic Qualifications (X2) on Learning Outcomes (Y) through Teaching Motivation (Z) is -0.024. The direct influence of Academic Qualifications (X2) on Learning Outcomes (Y) is 0.021, while the indirect influence of Academic Qualifications (X2) on Learning Outcomes (Y) through Teaching Motivation (Z) is -0.045. The direct influence obtained is greater than the indirect influence, thus it is known that Teaching Motivation does not mediate the influence of Academic Qualifications (X2) on Learning Outcomes (Y).

**Discussion**

Based on the partial t test results, it is known that the significance value for Lecturer Competencies (X1) and Academic Qualifications(X2) is below 0.05, which means that the Lecturer Competencies variable (X1) and Academic Qualifications (X2) has a positive and significant influence on Student Learning Outcomes (X1) Y). Lecturer Competencies (X1) has a positive influence of 0.938 which means that each increase in Lecturer Competencies is followed by an increase in Student Learning Outcomes by 93.8%. Academic Qualifications have a positive effect of 0.092 on Learning Outcomes, which means that each increase in Lecturer Academic Qualifications is followed by an increase in Student Learning Outcomes. Furthermore, the Simultaneous F test results are known that together with the Lecturer Competencies variable (X1), Academic Qualifications (X2) has a significant effect on Learning Outcomes (Y). Simultaneously the results of this study are supported by previous studies by Yuliani (2010), Sundara (2013), Warman (2015), Renol (2015) and Duriyat (2018).

The intervening variable test obtained that Lecturer Competencies (X1) is partially influences Teaching Motivation (Z) in a positive direction, in other words every increase in Lecturer Competencies will be followed by an increase in teaching motivation. Meanwhile the Academic Qualifications variable (X2) does not influence Teaching Motivation (Z) in a negative direction. But simultaneously, both of them significantly influence Teaching Motivation. Teaching motivation becomes an intervening variable for the influence of Lecturer Competencies on Student Learning Outcomes, but fails to be an intervening variable for the influenceof Academic Qualifications on Student Learning Outcomes.

From the previous explanation, it is briefly known that Lecturer Competencies and Academic Qualifications can directly and independently influence Student Learning Outcomes. Meanwhile, Teaching Motivation mediates the influence of Lecturer Competencies on Student Learning Outcomes. However, Teaching Motivation does not mediate the influence of Academic Qualifications on Student Learning Outcomes. So, in the process of teaching and learning many other factors that must be possessed by a lecturer, do not simply rely on high motivation but do not have the competence and qualifications that qualified. A lecturer who will teach must have the main requirements in the form of having high standard competencies and qualifications in accordance with the standards set by Ministry of Research, Technology, and Higher Education (Kemenristekdikti). This is an effort in creating qualified human resources.

**5. Conclusion**

Research conducted by determining the Effect of Lecturer Competencies and Academic Qualifications on
Student Learning Outcomes through Teaching Motivation at LP3I Medan Polytechnic in 2 Branches, the conclusions are as follow:

a) Partially Lecturer Competencies (X1) and Academic Qualifications (X2) variables have a significant influence on Student Learning Outcomes (Y).

b) Simultaneously Lecturer Competency (X1) and Academic Qualifications (X2) variables significantly influence Student Learning Outcomes (Y).

c) Partially, the Lecturer Competencies variable (X1) has a significant influence on Teaching Motivation (Z), while the Academic Qualifications variable (X2) has no influence on Teaching Motivation (Z).

d) Simultaneously Lecturer Competency (X1) and Academic Qualifications (X2) variables significantly influence Teaching Motivation (Z).

e) Teaching Motivation Variable (Z) is an intervening variable between the effects of Lecturer Competencies (X1) on Student Learning Outcomes (Y), but cannot mediate the influence between Academic Qualifications (X2) on Student Learning Outcomes (Y).

References