The Relationship of Teachers' Professional Competence toward Students' Learning Motivation at SMAN 1 North Siberut Mentawai Islands

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Abstract**-***This research was motivated by the low level of professional competence of teachers to ward students' motivation in the learning process at State Senior High School 1 (SMAN 1) North Siberut Mentawai Islands. The purpose of this study was to determine and describe the relationship of professional competence of teachers to students' motivation in SMAN 1 North Siberut Mentawai Islands. The hypothesis of this study is that there is a strong positive relationship between the professional competence of teachers on students' motivation in SMAN 1 North Siberut Mentawai Islands. This research is Descriptive Correlational the entire population of students of SMAN 1 North Siberut Mentawai Islands as much as 423 students. Sampling was done by way of random sampling technique in which the individual is drawn at random from class X to class XII. Samples were taken by 80 students using Slovin formula. The independent variable in this paper is the professional competence of teachers (X) and the dependent variable is the student's motivation (Y). Data professional competence of teachers and students' motivation derived from the questionnaire. Processing of the data in this research using SPSS 17.0 for Windows, with statistical analysis models correlation with a correlation coefficient (r) =0.836, and a significant value of 0.000. At the stage of data processing by using an error rate of 0.05. This result indicates that the r-sig 0.000≤0.05 alpha. To test the quality of a measuring tool used Corrected Item-Total Correlation to test its validity and to test the reliability of the Alpha Cronbarch item questionnaire with an average score of 2.86 for a total percentage score of 71.47% for Professional Competence of Teachers and the average score of 2, 83 with a total percentage score of 70.08% for student motivation. The results showed a positive relationship strong and significant correlation between the variables X with Y of 69.8% and 30.2% influenced by other variables not studied in this research.*

Keywords: Teacher Professional, Competence, Student Motivation.

I. INTRODUCTION

In general, the implementation of school learning activities arises various problems that affect students' learning motivation in achieving educational goals. One of the problems faced in the implementation of school learning activities, especially in the State State Senior High School 1 (SMAN) North Siberut Mentawai Islands Regency is the low level of professional competence of teachers in the learning process, this can be seen in the activities of the learning process such as the learning material learning, choosing and utilizing teaching methods, creating and designing fun learning programs, assessing the results of the learning process as well as creative and innovative weaknesses in stimulating students' motivation and learning motivation.

Basically every student has motivation but of course each of them needs a stimulus from the teacher so that they can achieve optimal performance. This situation that occurred in North Siberut N 1 High School in the Mentawai Islands District showed that students' learning motivation was not optimal. This can be seen from the level of student characteristics and the level of achievement of learning has not achieved the expected learning outcomes. This is also in accordance with the opinion of Sardiman (2007: 73), motivation is a change in energy in a person that is characterized by the emergence of felling which is preceded by a response to the purpose.

In accordance with the understanding of motivation and if this process takes place in an atmosphere of learning, motivation to learn is the overall power of movement in the students that lead to learning activities that ensure the continuity of learning activities and which provide encouragement in learning activities.

In the context of education, teachers are not only able to apply their professionalism, but have the potential to develop and improve the learning process for all subjects. The technological aspects have been combined in the school curriculum as an effort towards spreading and fostering a positive interest and attitude towards the development of learning technology. The school culture should have been implemented from the one that has been centered on the current material through the professional

competence of the teacher towards knowledgeable, creative and loving thinking using the latest technology. Some of the competencies that must be owned by the teacher according to Law No. 14 of 2005 concerning Teachers and Lecturers Article 10 paragraph 1 includes; 1). Pedagogic Competence, 2). Personality Competence, 3). Social Competencies and 4). Professional Competence.

In this connection, educators need to be proactive and aroused by increasingly sophisticated technological developments, especially teachers of SMAN 1 North Siberut in the Mentawai Islands, teachers must also improve their professional competence globally because in today's technological era, students are more advanced to ahead with the presence of various electronic equipment and modern ways of life that spur the development of quality human resources. As is the case at SMAN 1 North Siberut, the Mentawai Islands Regency shows that student motivation is not optimal. As seen in the table below.

Table 1. Student data, attendance level, learning achievement and characteristics of students in the learning process.

Class	sum of students	presence (%)	characteristics (%)	learning outcomes (%)
X	196	70 %	55 %	55 %
XI	98	70 %	55 %	65 %
XII	129	70 %	55 %	65 %

Source: North Siberut 1 High School

II. PROBLEMS

As a guide to expressing problems in this study, the problems in this study are; Are professional teacher competencies significantly related to student learning motivation ?.

III. RESEARCH METHODS

1. Type of Research

   This type of research is descriptive correlational, namely research directed at explaining the relationship between two variables. Using this method can determine whether there is a variable correlation between the independent variables (X) and the dependent variable (Y) or make predictions based on the correlation between variables.

2. **Population**

   The population in this study were all students in North Siberut N 1 High School, totaling 423 students

3. **Samples**

   Determination of the number of samples using Slovin formula with the following conditions:

   $$n = \frac{N}{1 + N(e)^2}$$

   $$n = \frac{423}{1 + 423\,(0.1)^2}$$

   $$n = \frac{423}{1 + 423.\,0.01}$$

   $$n = \frac{423}{1 + 4.23}$$

   $$n = \frac{423}{5.23} = 80{,}87 \text{ rounded up to 80 students}$$

   (Husein Umar, 2004:108)

4. Data Collection and Analysis Techniques

   The data used in this study was collected through questionnaires, namely the technique of collecting data by asking questions or written statements that were distributed to respondents with alternative answers already available. The measurements used in this study are using the Likert scale measurement method, and the collected data is analyzed through techniques :

a. **Descriptive analysis**, descriptive analysis is to analyze data by describing or describing data that has been collected as it is without intending to make conclusions that apply to general or generalizations.

This analysis aims to describe each variable in the form of pooling data into the form of frequency distribution results and then analyzing the percentage, mean, and coefficient of the variable and giving an interpretation of the analysis.

a. Verification of data is to re-examine the questionnaire filled in by the respondent to ascertain whether all statements have been answered completely by the respondent.

b. Calculate the frequency of the answers given by respondents to each item of the statement submitted.

c. Calculate the average total score of items by using the average formula for each indicator variable for positive and negative statements with the following formula:

Positive statement:

$$average = \frac{(4xSL) + (3xSR) + (2xKD) + (1xTP)}{n}$$

Negative statement:

$$average = \frac{(1xSL) + (2xSR) + (3xKD) + (4xTP)}{n}$$

4). Calculate the value of Respondent Achievement Level (RAL) with the formula:

$$RAL = \frac{Rs}{5} x \ 100$$

Table 2. Descriptive data interpretation is done by looking at RAL criteria as follows: TCR Scale Range

No	Scale Range	RAL
1	41%	Not good
2	41%-55%	Less
3	55%-65%	Enough
4	66%-80%	Well
5	81%-100%	Very good

Source : Arikunto (2006)

5). Calculates the degree of coefficient of determination (CD).
To find out how big the Y variable is determined by the X variable, the calculation of determination coefficient is done by the formula:
$CD = r^2 x \ 100\%$

a. Statistic analysis
In accordance with the formulation of the problem and the hypothesis of the purpose of this research is to prove the relationship of the teacher's professional competence to student learning motivation, the analysis model used is correlation. The test tool used is Pearson Corelation. According to Ghozali (2011) person corelation can be searched using the formula:

$$rxy = \frac{N \sum xy - (\sum x)(\sum y)}{\sqrt{\{N(\sum x^2) - (\sum x)^2\}\{N(\sum y^2)(\sum y)^2\}}}$$

Testing Criteria:
1) If sig <alpha 0.05 then the decision is Ho is rejected and Ha is accepted so that it can be concluded that the independent variable has a significant relationship with the dependent variable.
2) If sig> alpha 0.05, the decision is Ho is accepted and Ha is rejected so it can be concluded that the independent variable does not have a significant relationship with the dependent variable.

5. Research Instrument Test

a. Validity test

According to Arikunto (2006: 168), validity is a measure that shows the levels of validity or competence of an instrument. Instruments are declared valid or valid if the question in a questionnaire is able to reveal something that will be measured by the questionnaire. For this test the product moment correlation formula is used with a rough number as stated by Arikunto, (2006: 170) as follows:

$$ r = \frac{n(\Sigma XY) - (\Sigma X . \Sigma Y)}{\sqrt{[n\ \Sigma X2 - (\Sigma X)2][n\ \Sigma Y2\ (\Sigma X)2]}} $$

The statement is declared valid if the corrected item-total correlation ≥ 0.30 (Hair et al, 2010). This validity test is done through SPSS (Statistical Product Service Solution) program version 17.0 for Windows.

b. Reliability Test

Reliability shows that an instrument is reliable enough to be used as a data collection tool. Reliability shows the level of reliability of something. trusted, so reliable (Arikunto, 2010: 221). Instruments were declared reliable if they were cronbach ron 0.60 (Ghozali 2011). Instrument reliability testing is calculated using the SPSS version 17.0 for Windows. To find the item variance, use the formula:

$$ \alpha = \frac{K}{K-1}\ \frac{[1-\sum s2\,j]}{s^2\,x} $$

c. The decision criteria are as follows:

If r count > 0.60 then the instrument is reliable

If r count <0.60 then the instrument is not reliable

Reliability testing is done by finding the value of Cronbach Alpha. Each question item is declared reliable if it has Cronbach Alpha above 0.60.

d. Normality test

According to Hair et al., (2010), it was revealed that normality testing was carried out to determine the variance pattern that supports each variable. Normality testing is done by using the one sample Kolmogorov simirnov test using the SPSS version 17.0 for Windows. In normal testing each variable is determined by the asympt sig (2- tailed) value which must be above or equal to 0.05.

IV.   RESULTS AND DISCUSSION

1. Data Processing and Analysis.

Data processing and analysis is how to process raw data as a result of the distribution of research instruments to respondents, with the aim of answering the research hypothesis. The research that the author did was to use a sample of 80 people. The questionnaire that the writer distributed consisted of 23 question items for variable X (teacher professional competency) and 25 question items for variable Y (student learning motivation).

The questionnaire distributed is a closed questionnaire, meaning that the respondent does not need to explain further about the answers to the questions raised, they only put a checklist (√) on the available column and are considered the most appropriate to their opinion. The X and Y variables are (1) Always, (2) Frequent, (3) Rarely (4) Never. The data have an assessment range of 4,3,2,1 for each positive questionnaire items and 1,2,3,4 for each negative questionnaire item.

The acquisition of research data in the form of numbers is then analyzed by the author using statistics with the help of SPSS 17.0 for Windows program, to obtain conclusions about the teacher's professional competence towards the motivation of students of SMAN 1 North Siberut Mentawai Islands Regency, as well as to prove the hypothesis.

a. **Data Processing**

1). Validity

In this study the authors used a sample of 80 people. The data collected through the questionnaire technique is intended to measure teacher professional competence (variable X) which consists of 23 questions and student learning motivation (Y variable) consisting of 25 question items. From the 23 question items for variable X which are declared valid. each item in question has corrected item total correlation above or equal to 0.30. To measure student learning motivation, 25 questions were used. each item in question has corrected item total correlation ≥ 0.30. Therefore all valid question items can continue to be used into the data processing stage.

2). Reliability

Reliability testing is done by finding the value of Cronbach Alpha. Each question item is declared reliable if it has Cronbach Alpha above 0.60. Based on the results of the reliability tests that have been done, the summary results are shown in the table 3 below:

Table 3. Research Variable Reliability Test Results

Research Variable	Cronbach Alpha	Cut Off	Conclusion
Motivation	0.956	0,60	Reliable
Competence	0.980	0,60	Reliable

In the table it can be seen that each variable that has been supported by valid question items has Cronbach Alpha above or equal to 0.60.

So it can be concluded that the variables of student motivation and teacher competence have been supported by reliable or reliable question items, so that further stages of data processing can be carried out immediately.

b. **Data analysis**

1). Descriptive Analysis

Before hypothesis testing is carried out descriptive analysis, the process is carried out by making the distribution of respondents' answers as shown in the sub-section below:

a) Variable Frequency Distribution Teacher Professional Competence

Based on operational definitions and variable measurements, it was identified that to measure the professional competency variables the teacher used 5 indicators, with a total of 23 items.

Based on the results of the frequency distribution calculation that has been done, a summary of the results with the highest answer score is given to assess competency-related statements in carrying out basic tasks. ability related to the ability to plan, the average score given reaches 2.29. Overall, the 5 indicators used to measure competency produce an average score of 2.86 with a total score percentage of 71.47%, so it can be concluded that the professional competency level of teachers teaching at North Siberut N 1 High School is relatively high.

b). Frequency Distribution of Student Learning Motivation Variables

In this research model, the second variable used is student learning motivation. To measure student learning motivation, 5 indicators were used with a total of 25 items.

Based on the calculation process that has been done obtained a summary of results shows that the highest answer score given to assess student motivation in learning is in responding to statements related to the level of aspirations of students in carrying out the learning process, students who answer always number 16 people with average scores reach 2.99 while the lowest answer score is given in assessing statements relating to indicators of desire and conscious attitude in attending the lesson, the average score given is 2.51. Overall 5 indicators used to measure motivation give an average score of 2.83 with the percentage of respondents' total score reaching 70.08% so it can be concluded that the level of learning motivation of students at SMAN 1 Siberut Utara in following the learning process is relatively high.

2). normality test

Based on the results of the normality testing that has been done, a summary of the results can be seen in the table below:

Table 4. Normality Test Results

Research Variable	Asymp Sig (2-Tailed)	Cut Off	Conclusions
Motivation	0,060	$\geq 0,05$	Normal
Competence	0,052	$\geq 0,05$	Normal

In the table above, it can be seen that each of the research variables consisting of student learning motivation and teacher professional competence has sig (2-tailed) asymp values above or equal to 0.05. So it can be concluded that all research variables that will be included in the hypothesis testing can continue to be used.

3). Statistic Test

After all the research variables are stated to have been supported by valid and reliable question items and normally distributed, the stages of statistical testing can be done immediately. In accordance with the formulation of the problem and the hypothesis proposed for the purpose of this study is to prove empirically the relationship of teacher professional competence to student learning motivation in SMAN 1 North Siberut, a statistical analysis is performed using the correlation model. Based on the results of testing that has been done, the results obtained with the value of the correlation coefficient (r) are positive at 0.836, and a significant value of 0.000. At the stage of data processing carried out using an error rate of 0.05. The results obtained show that r-sig $0,000 \leq$ alpha 0.05, then the decision is Ho rejected and Ha accepted so that it can be concluded that teacher professional competence is positively and significantly related to student motivation at SMAN 1 North Siberut Mentawai Islands Regency.

2. Discussion

Relationship between students 'learning motivation in the process of learning and the relationship of teacher's professional competence to students' learning motivation in the learning process at SMAN 1 North Siberut, Mentawai Islands Regency.

The relationship between variables, namely the professional competence of teachers towards student learning motivation can be described as follows:

a. Relationship between Teacher Professional Competence in the Learning Process at SMAN 1 North Siberut, Mentawai Islands Regency.

Based on the findings of the data described earlier, it can be said that the professional competence of teachers in the learning process shows a strong and significant positive relationship. This can be seen from the highest answer given with an average score of 2.54 while the lowest answer score is given with an average score reaching 2.29. Overall, the 5 indicators used to measure teacher professional competence produce an average score of 2.86 with a total score percentage of 71.47%. The research data can be interpreted that teacher professional competence is one of the factors that influence student learning motivation. This means that the higher the level of professional competence of teachers in the learning process will encourage increased student motivation in learning. The increase or decrease in student learning motivation if associated with teacher professional competence is shown by the regression equation, namely $Y = 22,737 + 0,873 \ X$. If it is assumed that an increase in teacher professional competence of 1% will encourage an increase in student learning motivation by 0,873%.

b. Relationship between Student Learning Motivation in the Learning Process at SMAN 1 North Siberut, Mentawai Islands Regency.

Based on the results of testing that has been done, according to the respondent's answer including relatively high enough, this can be seen from the highest answer given with an average score of 2.99, while the lowest answer score is given with an average score of 2, 51. Overall, the 5 indicators used to measure students 'learning motivation gave an average score of 2.83 with the percentage of respondents' total scores reaching 70.08%.

c. Relationship between Teacher Professional Competence on Student Learning Motivation at SMAN 1 North Siberut, Mentawai Islands Regency.

Based on the results of the calculation of the correlation coefficient (r) with a positive sign obtained a value of 0.836, with a significant value of 0,000. At the stage of processing data using an error rate of 0.05. this result shows that r-sig $0,000 \leq$ alpha 0.05. This means there is a strong and significant positive relationship between teacher professional competencies towards student learning motivation.

Besides that the calculation of the coefficient of determination shows that 69.8% of the Y variable or Student Learning Motivation is determined by the X variable or the Teacher's Professional Competence and the remaining 30.2% is determined by other factors not examined by the author.

V. CONCLUSION

Based on the analysis and discussion of the results of the tests that have been carried out, some conclusions can be drawn as follows:

1. Teacher professional competency has a strong and significant positive relationship to student motivation in the High School 1 North Siberut in Mentawai Islands District, this can be seen from the acquisition of Pearson Correlation calculation results of 0.836.
2. Teacher professional competence relates to the learning process, meaning that the professional competence of the teacher in the learning process has an influence.
3. Student learning motivation has a significant relationship with the learning process, meaning that if students have a high motivation the learning process will go well.

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