

# The Influence of Teacher Competencies on the Learning Motivation and Learning Achievement of Social Studies Students in Junior High Schools of Banda Aceh

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This research aimed to examine the direct influence of professional competence, and teacher personal competence on learning motivation, and student achievement; the direct influence of motivation on students learning achievement; and the indirect influence (mediation) of professional competence, and teacher personal competence on student achievement through learning motivation. This research was conducted in Banda Aceh. The research method used was a survey method, and the research approach was a mix method. The population was comprised of 9,640 students from state junior high schools in Banda Aceh. The sample consisted of 385 students, who were selected using the Slovin formula. The data collection techniques used were observation, documents, and questionnaires. The data analysis techniques used were Structural Equation Modelling (SEM) with the Amost version 21, and Sobel Test to examine the indirect influence (mediation). The result of the structural model fit analysis showed that there was a direct influence of professional competence, and teacher personal competence on students' learning motivation. This resulted in the values of the standardised loading estimate being 0.43, and 0.37, respectively, which was supported by the critical ratio (CR) value being greater than the CR required. There was also a direct influence of professional competence, and teacher personal competence on the students' learning practices, and there was a direct influence of motivation on the students' learning achievement in the social studies

subjects in the junior high schools of Banda Aceh. Furthermore, there was an indirect influence of professional competence, and teacher personal competence on student achievement through learning motivation. The values of the indirect influence estimate at 0.21, and 0.40, were greater than the values of the direct influence estimate, which were 0.06, and 0.27.

**Keywords:** *Teacher professional competence, Teacher personal competence, Learning motivation, Learning achievement, Social studies subjects.*

## Introduction

The purpose of education is to improve the quality of human resources to be able to compete in the era of globalisation. Lonni et al. (2013) states that education is one of the factors that determines human quality. Drovnikov et al. (2016) mentions that a country's quality of education directly influences the quality, and ability of society in carrying out innovations, and creativity for the development of the nation. The Human Development Index of Indonesia is still experiencing fluctuations. In 2016, it ranked 110 out of 188 countries, and in 2017, it ranked 116 out of 189 countries in the world (UNDP, 2018). Likewise, the results of the 2016 Teacher Competency Test showed the average value of junior high school teachers in Banda Aceh was only 48.12. The value is below the national average, which is 58.25 (BPS, 2018). This illustrates the quality of education in Indonesia, especially in Banda Aceh, which is still relatively low. Harden and Crosby (2000) mention that one of the efforts in forming and developing quality human resources is by prioritising the students, and teachers because students are the next generation who will determine the progress of the nation, and the teacher is believed to be a determining factor in improving the quality of education. The Directorate of Education Personnel (2008) states that there is no improvement in the quality of schools without changes in the teacher quality.

Gumarova et al. (2016) mentions that the teacher is a professional who becomes a major factor in improving the quality, and achievement of students. Vocaldo and Andres (2017) state that professional teachers are people who meet the competency requirements for professional education tasks. In the world of education, teachers are the most influential component in creating quality learning processes, and outcomes. Therefore, any program implementing to improve the quality of education will not make a significant contribution without the support of professional, and highly competent teachers. Another factor that greatly influences students' learning achievement is motivation. Motivation is needed in the teaching and learning process because motivation can encourage students to carry out activities related to learning activities. Although the teacher's competence is good, without the motivation of the students themselves, it is difficult to attain high learning achievements.

This statement is in accordance with the opinion of Wanakacha et al. (2018), stating that intrinsic, and extrinsic motivation can improve student performance or learning achievement.

Many studies on teacher competencies, motivation, and student achievement have been carried out at both the national, and international levels. However, this research is different because firstly, it explored more variables, while other studies have not (Lee, 2010; Rondi, 2015; Buaq, 2016; Kiasi, 2016; Yurizki et al., 2018). Secondly, this research has mediating variables, whereas previous studies, which the authors are aware of, do not have mediating variables. Thirdly, this research analyses in more detail the dimensions of the variables that influence motivation, and achievement. Meanwhile, other studies only describe them (Stanisic & Maksic, 2014; Sinaga, 2014; Buaq, 2016; Kiasi, 2016; Razali et al., 2018; Yurizki et al., 2018). Fourthly, other studies use simple data analysis tools, while this research uses Structural Equation Modelling (SEM), and Sobel Test data analysis techniques. Thus, all indicators of each variable could be observed clearly, such as both direct influence, and indirect influence.

The results of this research can provide input for teachers in improving their competence, especially those related to the mastery of subject matter, and polite attitude because the teacher must be a role model for students. This research is expected to provide input for the Government, and schools, in order to provide training to teachers to be able to improve their competencies to actualise higher quality student learning outcomes. Based on the descriptions in the introduction, the objectives of this research are: 1) to test the influence of teacher professional competence, and teacher personal competence on students' motivation in social studies subjects in the junior high schools of Banda Aceh; 2) to test the influence of teacher professional competence, and teacher personal competence on students' learning achievement in social studies subjects in the junior high schools of Banda Aceh; 3) to test the influence of motivation on students' learning achievement in social studies subjects in the junior high schools of Banda Aceh; and 4) to test the influence of teacher professional competence, and teacher personal competence on achievement through student learning motivation in social studies subjects in the junior high schools of Banda Aceh.

### **Theoretical Foundation**

All human activities will obtain results. Likewise, learning activities will certainly achieve results in the form of learning achievement. Learning is a process that will produce changes in attitudes, knowledge, and skills. Skinner (1986) states that behaviour change is a learning process itself, while learning achievement is the perfection achieved by a student in thinking, feeling, and doing. Nasution (2018) mentions that learning achievement is declared perfect when it meets three aspects: cognitive, affective, and psychomotor. Purwanto (2013) states that learning achievement is the result that shows the extent of the level of ability and success

of students in achieving learning goals. Hence, it can be concluded that learning achievement is the mastery of knowledge, skills, and changes in a person's attitude after the activities or teaching and learning process at school. The learning achievement of a student is known after being tested by the teacher.

Slamento (2010) mentions that learning achievement is also influenced by several factors, and outlines that there are two internal factors consisting of physical factors, and psychological factors, such as intelligence, attitudes, interests, talents, and motivation. Meanwhile, the external factors include environmental factors, and instrumental factors, such as teacher competence, facilities and infrastructure, and curriculum. Motivation in teaching and learning is very necessary because motivation is the encouragement and desire to learn. According to Syah (2013), learning motivation is divided into two dimensions: intrinsic motivation, and extrinsic motivation. Intrinsic motivation comes from within the students themselves. Thus, they can move and direct themselves in behaviour. For example, the encouragement to attain high achievement. Besides, extrinsic motivation is motivation that comes from outside the individual, and can arouse the individual to move, so as to achieve the desired goals.

Motivation is a direction and perseverance of students to achieve goals. A student's main goal is to achieve high learning outcomes, so that they can be categorised as successful. Maslow (1970) states that motivation can emerge from within students themselves, such as the existence of a need or desire to succeed, as well as the encouragement obtained from outside, such as coercion, punishment, and rewards given if the student has high achievements. In addition to motivation, teacher competency factors also play a very important role in improving student learning achievement. Teacher competence is the ability that must be possessed by a teacher. The teacher, as an educator, supervisor, and instructor, must have a number of competencies so that the teaching and learning process can be as successful as expected. Sanjaya (2015) mentions that there are four competencies that must be possessed by a teacher: personal competence, professional competence, pedagogical competence, and social competence. Scrivner (2009) explains that qualified teachers are those who have the ability and influence to facilitate the learning process of students through the methods and strategies used. Professional competence is the ability of teachers to master the material, while personal competence are exemplary attitudes that teachers have, and are usually imitated by students.

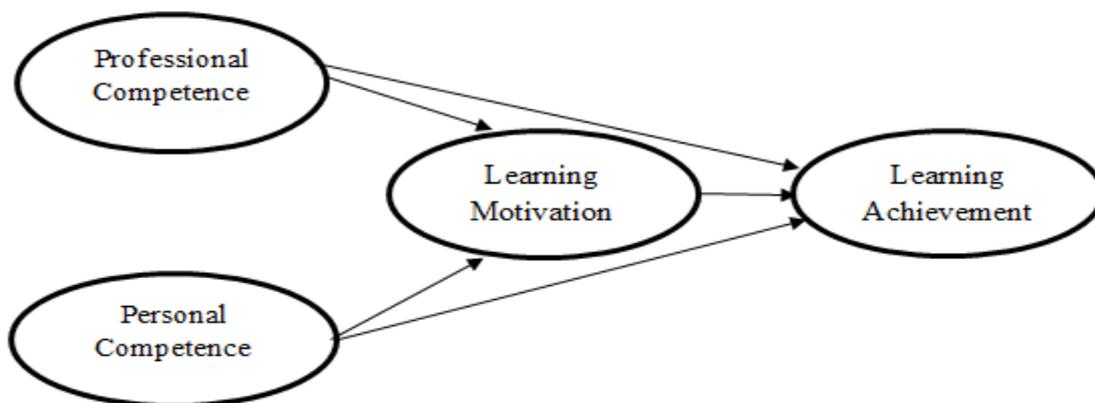
## **Research Methods**

This research uses a survey method, which takes samples from the population, and uses questionnaires as a tool to collect the main data, as mentioned in Singarimbun and Effendi (2010). The data were collected by distributing guided questionnaires to students, and

collaborating with social studies teachers in all state junior high schools in Banda Aceh. The questionnaire must not be taken home. Thus, all questionnaires can be returned. Before being distributed to the respondents, the questionnaire was first tested for its validity, and reliability. The data obtained from the respondents was as samples taken from the population. The population in this research were all state junior high school students in Banda Aceh, totalling 9,640 students. The sampling was selected using the Slovin formula. The calculation results obtained 385 students as the samples, which consisted of 19 state junior high schools in Banda Aceh. The data analysis technique used in this research was SEM analysis. Therefore, the number of the sample chosen is in accordance with the SEM rules, which requires a sample of at least five times the number of indicators. The number of indicators is 40. The data collected through the questionnaires is then analysed with the AMOS Version 21 program.

In addition, the approach used was a mixed approach by applying two approaches at once. Creswell (2012) mentions the two approaches are qualitative, and quantitative approaches. In order to test the direct influence of the exogenous variables on the endogenous variables, the SEM analysis was used. Meanwhile, the Sobel Test was used to examine the indirect influence of the exogenous variables on the endogenous variables through the intervening variables (Mediation).

**Picture 1.** Theoretical Framework



### Hypothesis

Nazir (2015) states that the hypothesis is a temporary conjecture of research problems, whose truth must be tested empirically. Based on the concepts, the hypotheses in this research are:

1. There is an influence of teacher professional competence, and teacher personal competence on students' motivation in social studies subjects in the junior high schools of Banda Aceh.

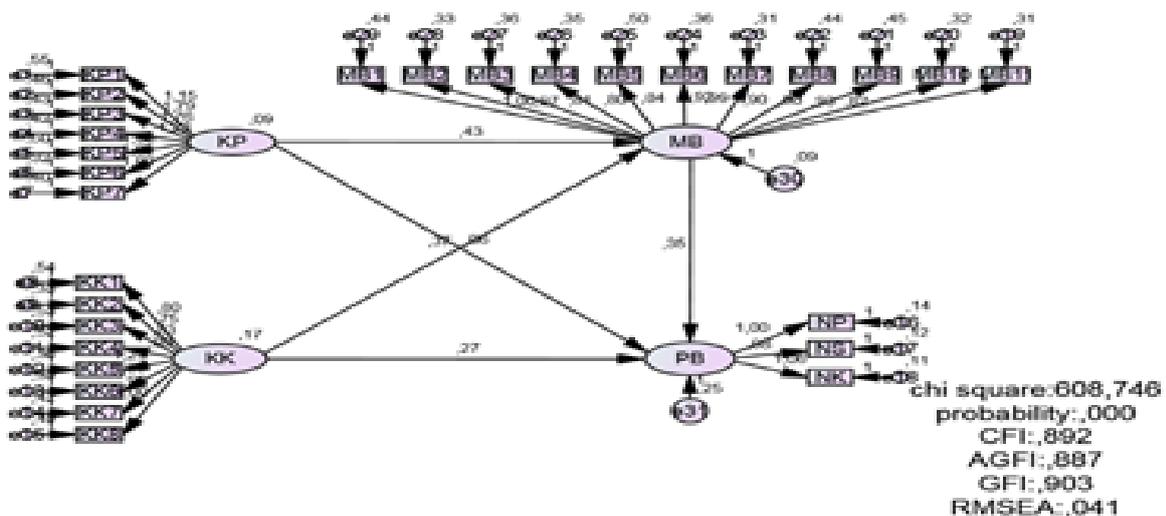
2. There is an influence of teacher professional competence, and teacher personal competence on students' learning achievement in social studies subjects in the junior high schools of Banda Aceh.
3. There is a motivational influence on student achievement in social studies subjects in the junior high schools of Banda Aceh.
4. There is an influence of teacher professional competence, and teacher personal competency on achievement through students' motivation in social studies subjects in the junior high schools of Banda Aceh.

## Research Result

### *Structural Equation Modelling (SEM) Analysis*

The following is a picture of the full model used in this research. Namely two exogenous variables in the form of teacher professional competence, and teacher personal competence, and the intervening variables, and endogenous variables in the form of student achievement. Several of the suitability indexes and cut-off values produced by AMOS are used to test the feasibility of the model.

**Picture 2.** SEM Model Path Diagram



**Table 1:** Goodness of Fit Index

Goodness of Fit Index	Cut-of Value	Estimated Results	Feasibility Level
$\chi^2$ chi square	$\chi^2$ count is expected to be smaller than $\chi^2$ table	608.746	<i>Poor Fit</i>
Significancy Probability	$\geq 0.05$	0.000	
RMSEA	$\leq 0.08$	0.041	<i>fit</i>
GFI	$\geq 0.90$ dan $0.80-0.90$	0.903	<i>Marginal fit</i>
AGFI	$\geq 0.90$ dan $0.80-0.90$	0.887	<i>Marginal fit</i>
CFI	$\geq 0.95$ dan $0.80-0.90$	0.892	<i>Marginal fit</i>

Table 1 explains the results of the evaluation criteria for the Goodness of Fit, where the tested model is between a poor fit, and perfect fit, with marginal fit criteria. Thus, it can be concluded that the tested model is feasible, and can be further analysed.

### Structural Model Fit Analysis

The Structural Model Analysis was carried out with a significant coefficient test. The results of the analysis using AMOS obtained the structural equation values of the fit model, as in Table 2 below.

**Table 2:** Structural Model Fit Test Results (Regression Weights)

			Estimate	SE	CR	P	Ket.
MB	<---	KP	0.427	0.107	4.003	***	Significant
MB	<---	KK	0.371	0.076	4.861	***	Significant
PB	<---	MB	0.350	0.122	2.864	0.004	Significant
PB	<---	KP	0.061	0.130	0.473	***	Significant
PB	<---	KK	0.274	0.099	2.784	0.005	Significant

### Structural Model Fit Analysis

#### *The Influence of Teacher Professional Competence, and Teacher Personal Competence on Students' Motivation in Social Studies Subjects in the Junior High Schools of Banda Aceh*

The structural model fit test results obtained a critical ratio (CR) value of 4.003 for the influence of teacher professional competence on motivation, and 4.861 for the influence of teacher personal competence variables on student motivation. The value obtained is greater than the value of the CR required in this research, which is  $\pm 1.96$ . Therefore, it can be concluded that there is a significant and positive direct influence of teacher professional

competence, and teacher personal competence on students' motivation in social studies subjects in the junior high schools in Banda Aceh.

The value of the standardised loading estimate is 0.43 for the influence of teacher professional competence, and 0.37 for teacher personal competence, meaning that when the teachers' professional competency increases by one unit, the students' learning motivation will increase by 43 per cent. As for the teacher personal competency variable, if it increases by one unit, the students' learning motivation also increases by 37 per cent. This shows that teacher competency is an important factor in increasing learning motivation. With the high motivation of the students themselves, and supported by the ability of the teacher, the activities will be carried out well to attain the expected results.

This situation is consistent with the results of research conducted by Lee (2010), which states that the quality of the teacher in teaching has a significant influence on student motivation and learning achievement. The same finding was also discovered by Rondi (2015), who concluded that there was a positive direct influence between the teacher competency variables on student motivation.

### ***The Influence of Teacher Professional Competence, and Teacher Personal Competence on Students' Learning Achievement in Social Studies Subjects in the Junior High Schools of Banda Aceh***

From the Regression Weights Analysis, the results obtained are that the standardised loading estimate value of 0.06 is for the influence of teacher professional competence, and 0.27 for teacher personal competency. This means that when the teachers' professional competence increases by one unit, student achievement will increase by 0.06 per cent. As for the teacher personal competency variable, if one unit increases, student achievement also increases by 27 per cent. Hence, it can be concluded that there is an influence of teacher professional competence, and teacher personal competence on student achievement in social studies subjects in the junior high schools in Banda Aceh. Although the influence is small, it is significant and positive. This shows that teacher professional competence, and teacher personal competence are important factors in improving student achievement, which later will provide an impact on the quality of human resources. It is expected that the creative and innovative generation will arise, and they will be able to compete internationally.

This finding is consistent with the results of Wulandari's research (2013), which states pedagogical, and professional competencies can influence learning achievement. Akiri (2013) also identifies that the influence of the teacher will contribute good results in learning achievement. In addition, there are several results of other studies that strengthen the results of this research. They are Sariyani (2017), and Yurizki, et al. (2018), who concluded that

teacher competence is very good. This is seen from teachers in mastering scientific substance related to the field of research, and understanding teaching material. Thus, this can improve student learning achievement.

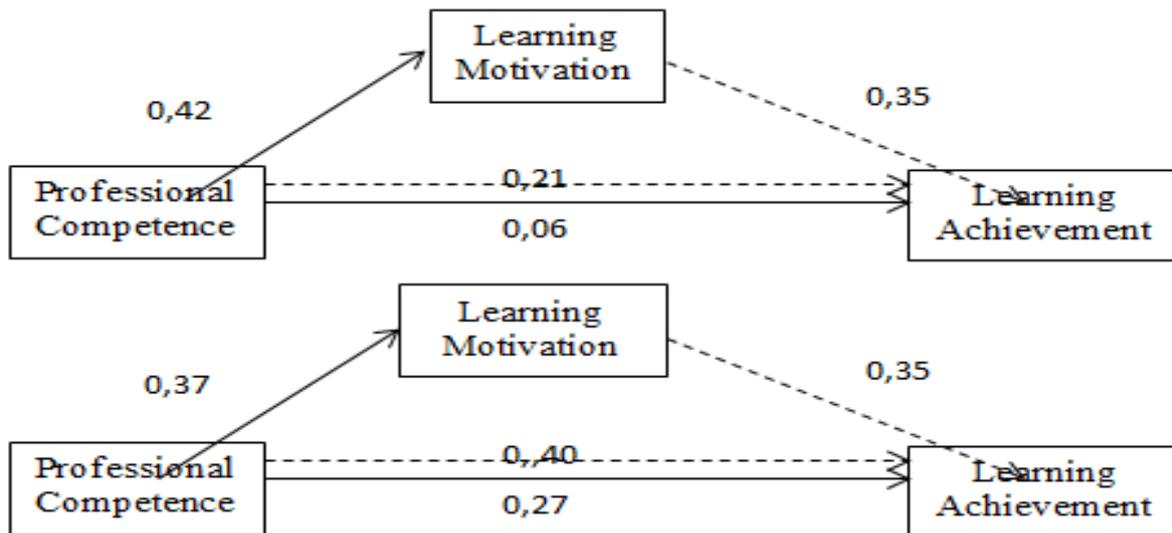
### ***The Influence of Motivation on Students' Learning Achievement in Social Studies Subjects in the Junior High Schools of Banda Aceh***

The test is carried out by comparing the required CR value with the CR value obtained from the calculation of the standardised loading estimate, which is 2.86. This number is greater than that used in this research. Therefore, it can be concluded that there is a direct influence of motivation on students' learning achievement in social studies subjects in the junior high schools in Banda Aceh. The standardised loading estimate value of 0.35 means that when motivation increases by one unit, student achievement will increase 35 per cent.

This is consistent with research conducted by Lee (2010), which states that both intrinsic, and extrinsic motivation to learn are the greatest determinants of achievement because motivation has the highest correlation with achievement. Ahmad Rondi (2015) also concluded that there is a positive influence of learning motivation on student achievement.

### ***The Influence of Teacher Professional Competence, and Teacher Personal Competence on Achievement through Students' Motivation in Social Studies Subjects in the Junior High Schools of Banda Aceh***

An indirect influence test using mediating variables was employed in order to determine the influence of teacher professional competence, and teacher personal competence on achievement through student learning motivation. The mediation variables in a research function as an intermediary or mediator of the relationship between the independent variables with the dependent variable. Motivational variables can play a perfect role (full mediation), with the mediation variable the relationship between the independent variables to the dependent variable, which becomes significant. If there is no variable, the relationship between the variables is not significant. If it acts as a partial mediation, with the mediating variable the relationship between the variables, it only becomes weaker or stronger but does not make it insignificant. To test the indirect influence, it is carried out by using a model developed by Baron and Kenny (1996), and illustrated by Asyraf et al, (2014). The results of the calculation can be explained in the figure below.



Regarding the influence of teacher professional competence on learning achievement through student learning motivation, this is indicated by the results of the calculation of the Sobel test, where the indirect influence of 0.21 is greater than the direct influence, which is 0.06. Likewise, with teacher personal competence that influences student achievement, this is seen from the value of the indirect influences, which is 0.40, and is greater than the direct influence, which is 0.27. Therefore, it can be concluded that either directly (direct influence) or indirectly (indirect influence), teacher professional competence, and teacher personal competence affect student achievement in social studies subjects in the junior high schools in Banda Aceh.

Therefore, teachers must improve their competence in mastering learning material widely and deeply, in order to guide students to master knowledge, and skills optimally. Jarmita (2015) states that teachers must also master the learning methods or models and understand the character of students. It is expected that learning objectives that have been set can be optimally achieved. Teachers must also be able to communicate effectively with students, in order to achieve a good quality teaching and learning process.

## Conclusions and Recommendations

The results showed that there was an influence of teacher professional competence, and teacher personal competence on student motivation; there was a significant influence of teacher professional competence, and teacher personal competence on student achievement; and there was an influence of teacher professional competence, and teacher personal competence on student achievement through motivation (mediation variables). In conclusion, the teachers' competencies both directly, and indirectly can influence and increase student learning achievement. This research differs from previous studies in terms of the indicators



used, and the number of variables used, which are teacher competency (professional competence, personal competence), learning motivation, and learning achievement, whereas other studies examined fewer variables. This research also uses mediating variables. The data analysis methods and techniques including testing the direct influence using SEM, and testing the indirect influence using the Sobel test, whereas other studies only used descriptive and regression analysis.

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