



Received: May 29, 2021

Revised: June 13, 2021

Accepted: July 13, 2021

\*Corresponding author: Hastuti Mulang, Department of Management, Faculty of Economics and Business, Universitas Muslim Indonesia, Makassar, Indonesia

E-mail: [mulanghastuti80@gmail.com](mailto:mulanghastuti80@gmail.com)

## HUMAN RESOURCE MANAGEMENT | RESEARCH ARTICLE

# The Effect of Competences, Work Motivation, Learning Environment on Human Resource Performance

Hastuti Mulang<sup>1\*</sup>

<sup>1</sup> Department of Management, Faculty of Economics and Business, Universitas Muslim Indonesia, Makassar, Indonesia. Email: [mulanghastuti80@gmail.com](mailto:mulanghastuti80@gmail.com)

**Abstract:** This research is motivated by efforts to improve the quality of education, and teacher performance has not been achieved as expected. This can be seen from the number of students' achievement decreases. Due to the teacher's performance has not yet produced a standard output of students who excel. The cause that occurs can not be separated from the competence, motivation, and learning environment that still has to be improved. These three variables directly or indirectly have an influence on teacher performance and the quality of education. This study aims to determine and analyze the effect of competence, motivation, learning environment on teacher performance, the quality of education, and indirect effects through teacher performance on the quality of education. The population of this study was all elementary school teachers at the Education Office of South Sulawesi Province. The total sample study is 393 respondents. The data were analyzed using the Structural Equation Model (SEM) utilizing AMOS 18. The study results found that direct or indirect effect the competence, motivation, learning environment had a positive and significant effect on teacher performance, as well as relationship antecedent variables on the quality of education. Including the performance of teachers, effect on quality of education.

**Keywords:** Competence, Work Motivation, Learning Environment, Education quality, Performance  
**JEL Classification Code:** 015, L20, L30

## 1. INTRODUCTION

The advantages of a country can be seen from the progress of the world of education it has. The quality of education is very urgent and a priority to be realized in today's global competition. The quality of education in Indonesia needs to be aligned with countries that have advanced in education. Especially in the era of the industrial revolution 4.0, which is marked by demands to develop high thinking skills. The government makes every effort to improve the quality of education, including during the COVID 19 pandemic. A series of transformations in the education sector have launched various emergency policy initiatives based on planned sustainability. All educational programs and activities are carried out virtually using Information and Communication Technology (ICT) (Afroz et al., 2020; Carmeli & Dothan, 2017; Dai et al., 2019). Corona Virus Disease in Indonesia currently impacts all sectors of society, one of which is the education sector. Facing this, the National education system must be able to deal with the COVID-19 pandemic conditions and demand actors in the world of education to be able to improve the quality of education, which is determined by the national rate of education, academic quality, extra education and graduate potential (Bosveld et al., 2020; Patricia, 2020). To achieve this goal, the learning process during the COVID 19 pandemics was carried out at home through online learning to break the chain of the spread of COVID 19. All students and teachers learned from home, which was suddenly done without any preparation. The unpreparedness of all elements in education is a big obstacle; changing the way of teaching and learning from face-to-face to online requires the readiness of all aspects, starting from schools, teachers, students, and parents (Purwanto et al., 2020; Bhamani et al., 2020). In addition, it takes a role that determines the success of achieving the quality of education (Julius Ongong & Ifedha

Akaranga, 2013). An essential component in determining the successful implementation of the process is the teacher. The teacher is the primary educator directly or indirectly involved in students' learning process (Dwi Riyanti et al., 2016; Feola & Nunes, 2014). Teacher performance results from actual work in quality and quantity achieved by a teacher in carrying out his duties following the responsibilities given to him, including preparing learning programs, implementing learning, implementing evaluations, and evaluating analysis (Čech et al., 2016).

The quality of education is still low due to the low performance of teachers in improving the quality of education (Margot & Kettler, 2019). This can be seen from the number of schools in South Sulawesi Province, especially elementary schools, public and private, teaching staff to be encouraged to produce outstanding students. This is because competence, motivation, and learning environment do not support teacher performance and the quality of education achieved (Chick et al., 2020). Human resources in education play an essential role in realizing organizational goals (Heikkilä et al., 2017; Loyarte-López et al., 2020). This is because the education administration system has not been effective in its application, especially concerning the education administration system that prioritizes the quality of human resources specifically for educators (teachers) that still do not meet the standards to support efforts to improve performance and quality of education (Kudasheva et al., 2015). Teacher performance and quality of education are goals and objectives that must be achieved. The non-fulfillment of the expected standards results in the low performance of teachers in producing the output of students who are underachieving in the millennial era due to the influence of competence, motivation, and a learning environment that is still low and less available (Van den Berghe et al., 2014). Directly or indirectly have an impact on teacher performance and the quality of education. Considering human resource management in performance and quality, it must continue to be developed (Dong & Phuong, 2018).

There is a gap research phenomenon that shows that teacher competencies in the form of educational, personality, social, professional, and spiritual competencies must be appropriately applied, making students adopting the knowledge taught by teachers challenging to accept, considering that the competencies possessed by teachers have not resulted in ease for students. Students in obtaining and carrying out the learning process (Lorinkova et al., 2012). The motivational phenomenon experienced by most teachers tends to be less motivated because the demands for fulfilling motivational needs have not been realized (Rodrigo & Palacios, 2021). These motivational needs include physiological conditions, a sense of security, social interaction, esteem, and self-actualization (Burhan et al., 2014). The phenomenon of the learning environment has a significant role in facilitating and expediting a teaching and learning process in improving teacher performance and education quality (Dwi Riyanti et al., 2016). The learning environment that needs to be supported in the activities of the learning process is the application of the applicable curriculum that has not been adequately socialized in teaching subjects, lesson plans that are not following the content of teaching education. Learning media that have not been supported by the availability and utilization, availability of books in the library are still limited, and the need for sports facilities that invest in carrying out educational activities.

The phenomenon of increasing competence, meeting motivational needs, and the limitations of the available learning environment are three components that significantly affect teacher performance and education quality (Kang et al., 2019). It can be seen that as a result of the three components still need to be improved; the teacher seeks to enhance the quality of teaching outcomes, punctuality in completing the curriculum and lesson plans is not late, is required to have the initiative in completing work, strives to have the ability to meet the teaching and learning process well, and improves the application of fostering cooperation between teachers and students (Van den Berghe et al., 2014). As a result of the teacher's performance has not improved, it is natural that the quality of education is still far from expectations. This can be seen from the assessment seen from the success of teachers in developing the quality of education through efforts to show the national rate of teaching, learning, extra education, and graduates' potential. So quality can be seen from the implementation, standardization process, and outstanding outputs. This is an essential and valuable consideration and contribution to putting in a reputable journal to show scientific novelty in the field of human resource development that competitive quality education is achieved from high-performing teachers

according to the direct or indirect influence of ownership of competence, high motivation, and learning environment. be considered.

## 2. Literature Review

Competence is a basic characteristic of a person that indicates how to think, behave, and act as well as draw conclusions that can be carried out and maintained by a person at a certain time. The definition of competence has several meanings contained in it. e.g, the basic characteristics (underlying characteristics) of competence are part of a deep and inherent personality in someone who has predictable behavior on various job tasks (Mitchell et al., 2020; Rina et al., 2017). Causal relationship (causally related) means that competence can cause or be used to predict a person's performance, meaning that if you have high competence, you will have high performance as well (as a result). Criteria referenced which make as a reference that competence will actually predict someone to work well. There are several characteristics of essential competencies in each person, for example, Traits that make a person have a behavioral attitude or how the person responds to something in a certain way (Teece et al., 1997). For example, self-confidence, control (self-control), fortitude, or endurance (hardiness). A motive is something that a person wants or consistently thinks and wants that results in an action or the basis from within concerned to take action. Innate (self-concept), namely the attitudes and values that a person has. These attitudes and values can be measured through tests to determine what deals they have and what attracts someone to take action. Knowledge (knowledge), namely information that a person has in a particular field or area. Knowledge is a complex and somewhat complicated competency; why is that? Because each score on a knowledge test is often inaccurate in predicting performance in the workplace, this is due to the difficulty of measuring the knowledge and skill requirements used in the job: skills or expertise, namely the ability to carry out specific tasks, both physically and mentally. The characteristics of motivation, according to Yip et al (2017) there are four e.g., Motivated behavior is driven, the impetus may happen on a learned basis. Motivated behavior gives direction. If someone has a source that can lead to motivation, it means that he is achieving a goal that is expected to be satisfactory. Motivation raises the intensity of action. If someone is excellent in academics, he will be motivated to prove it.

Motivation is effective. Because behavior has an a-directed meaning goal, a person chooses the appropriate behavior to achieve goals or satisfy needs. Based on the above understanding, motivation has four characteristics: motivation behavior is driven, direction, the intensity of action, and directed meaning. Kim et al. in Davies et al. (2016), in Motive, reflects an interest in the subject as a major determinant of choice, which reflects. According Deegan (2002) Motives offer reasons for certain behaviors through interests and goals according to values. Motives can be intrinsic or extrinsic. Explanations Intrinsic depend on the perception of knowledge. While extrinsic about the quality of learning objects such as interest in the content of majors academic. Based on some of the opinions above, it can be concluded that motivation reflects an interest in the subject to behave according to personality. Motivation is intrinsic and extrinsic; motivation as intrinsic as the perception of knowledge about the object. For motivation, extrinsic forms of results and quality of things such as interest in the academic field. Motivation theory explains someone motivated to determine his interest by dividing motivation into 2, namely motivation intrinsic and extrinsic. Nguyen et al (2019), intrinsic and extrinsic that are applied to education include, Motivation is reflected through Learning for himself, someone who is interested in something will try to learn it.

As an individual goal, when someone has a purpose, then someone wants to achieve and strive. Satisfying the mind like curiosity about it, then someone will look for information related to it. Extrinsic motivation is reflected in the perceived results of the department in the form of achieving grades at the end of each lesson, so that can be drawn conclusions about the effects during the Learning carried out (Vu, 2020). Rewards outside of learning situations, for example, easy achievement of grades and career opportunities after learning. Based on the opinion above, it can be concluded that motivation is divided into two, namely, Intrinsic Motivation, which is applied in the form of learning for its sake own, as a separate goal, satisfying inner needs. Extrinsic motivation is in the form of perceived results from the significant and rewards outside the learning situation.

The learning environment is one part of the learning process to achieve learning goals, where the environment will affect teaching and learning activities in schools (Husni, 2020). According to Evans (2008) the learning environment is an environment that affects the learning process, both the physical environment and the social environment. The domain will affect the individual and vice versa; the individual can also affect the environment. The learning environment, such as facilities and infrastructure, the size of the environment, lighting, and noise, dramatically influences whether the learning environment is pleasant or not to affect motivation and the learning process. Comfortable classroom conditions will help students concentrate more easily, obtain maximum learning outcomes, and enjoy learning activities well (Hu, 2020). The learning environment is where teaching and learning activities and processes occur (Forrest, 2004). The learning environment is everything that is used in the learning process which includes the conditions, circumstances, and facilities in the neighborhood. Through the learning environment, a person can get an education directly or indirectly influenced by the natural environment and social environment (Caporael & Baron, 2013). The learning environment is an external factor that can influence development and influence students in their learning process. The learning environment is focused on good facilities. Still, it is also necessary to pay attention to the comfort and tranquility of the environment so that attention can be focused on the lesson. According to Lage et al (2000), a good learning environment is a challenging and stimulating environment for learning as well as a sense of security and satisfaction so that it can achieve the expected learning goals. Overall, the learning environment includes physical, social, intellectual, values, and relationships with educators. According to Lage et al (2000), the learning environment is divided into the physical environment, socio-emotional relationships, peer and community environments, and influences from foreign domains. The learning environment is classrooms and includes room designs such as laboratories, libraries, tutorial rooms, and non-formal learning places (United Nations of Educational, Scientific and Cultural Organization. Based on the description above, it can be concluded that the learning environment is the place where the teaching and learning process occurs. The learning environment can affect the success of a learning process. The learning environment is inanimate objects around the learning place, but the people who are in that place also include the learning environment. Perceptions of the learning environment are shaped by a new curriculum designed to identify areas that need modification (Papp et al., 2003). Perception is the relationship between humans and their environment and how a person understands and assesses their environment. A good perception will increase students' motivation to learn (Mayo, 2000). Perception is influenced by several factors such as attention, the type of stimulus that is more striking among other stimuli, past experiences and attitudes (Huang et al., 2020; Masouras & Papademetriou, 2018).

### 3. Research Method and Materials

#### 3.1. Data Samples

This research is designed to answer the problems that have been formulated and the objectives to be achieved and to test the hypothesis. The population in this study were all elementary school teachers at the South Sulawesi Provincial Education Office, totaling 72,336 people. Using the Slovin formula, the number of respondents was 393 respondents.

#### 3.2. Measurement

Analysis of the data using SEM analysis with the help of the AMOS 18 program. In constructing the path diagram, the theoretical model that has been built in the first stage is described in a path diagram. In flowcharts, relationships between constructs are indicated by arrows. Straight arrows are a direct causal relationship between one construct and another, while curved lines between constructs with arrows at each end indicate the correlation between constructs. The constructs built in the flowchart are divided into two groups: first, independent constructs, which are known as source variables or independent variables that are not predicted by other variables in the model. An

independent construct is a construct addressed by a line with one arrowhead. And second, dependent constructs, which are the factors that are predicted by one or more constructs. The conceptual framework in this study is in the form of a description of the relationship in the construction of the observed variables as well as the direct relationship between the independent variables and the dependent variable. There are four observed variables which consist of two exogenous variables and two endogenous variables. Exogenous variables in this study are leadership, motivation, and competence, while endogenous variables are job satisfaction and teacher performance. Performance appraisal as an end variable refers to the theory of teacher performance standards from (Haerani et al., 2020) that teacher performance standards related to the quality of teachers in carrying out their duties seen from the ability to plan and prepare for teaching, mastery of the material to be taught to students, knowledge of teaching methods and strategies, assignments to students, ability to manage students, and the ability to conduct assessments and evaluations.

Job satisfaction on performance can be realized by applying maintenance theory. The maintenance theory proposed by (Robbins & Judge, 2008) that job satisfaction can be achieved and not realized depends on the people who work and the work produced, which is assessed based on work challenges, work progress, achievement, recognition, and work itself. The first variable, namely leadership, refers to the type of leadership theory from (Ueno & Krause, 2018). Leadership based on the kind of personal, non-personal, democratic, authoritarian, paternalistic, and talent. The second variable is motivation, which refers to the ERG theory from (Yip et al., 2017) that everyone needs to be motivated to meet the needs of Existence, Relationship, and Growth, which are commonly called ERG needs. This element of ERG includes demands to fulfill basic needs, physical needs, family needs, social needs, work needs as well as productive and creative needs. The third variable, namely competence, refers to the theory of self-competency theory proposed by (Park & Hawang, 2015) that one's self-competence can be recognized from the pedagogical, personality, social, and professional abilities. Based on the description of the variables and theoretical support stated above, the researchers then pour in the conceptual framework of the study as follows in Figure 1.

## 4. Results and Discussion

### 4.1. Statistical Result

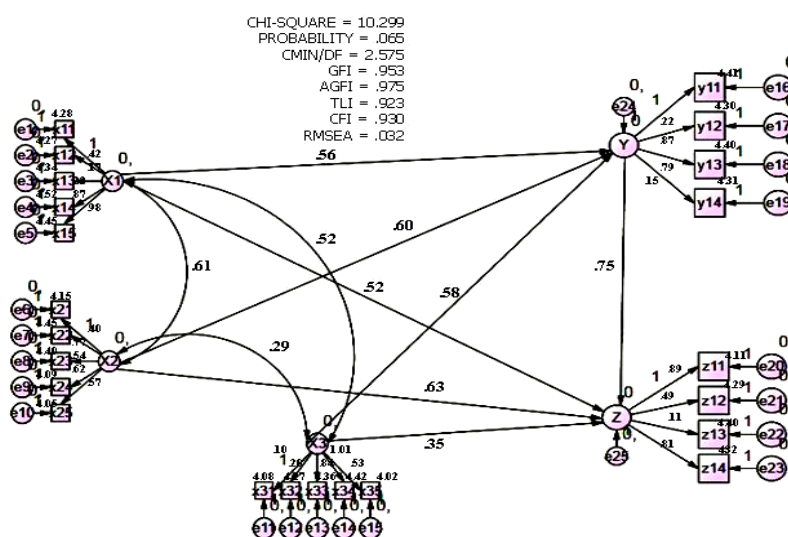


Figure 1: Initial Stage Test Results

Based on the SEM model that is already fit, the significance test of the relationship between variables is carried out. The test is done partially by comparing the value of the critical ratio (CR) or probability (p) on the value of regression weights. The critical ratio (CR) value is the same as the critical student value (t-value) in the ordinary (non-structural) regression model. A complete model



that can explain the causal relationship between the variables of competence, motivation, and learning environment on teacher performance and quality of education, which results from the development of single models of each factor tested previously, is shown in Figure 1 as follows. Figure 2 shows that the Chi-Square value becomes smaller, namely 8,635 with a probability of 0.078 and CMIN/DF of 2.159, GFI of 0.968, AGFI of 0.955, TLI of 0.934, CFI of 0.941, and RMSEA 0.025. The results of the initial and second stage tests as a whole are following the established standards (cut-off value) or, in other words, have met the criteria for Goodness of Fit Indices. A complete description is presented in Table 1.

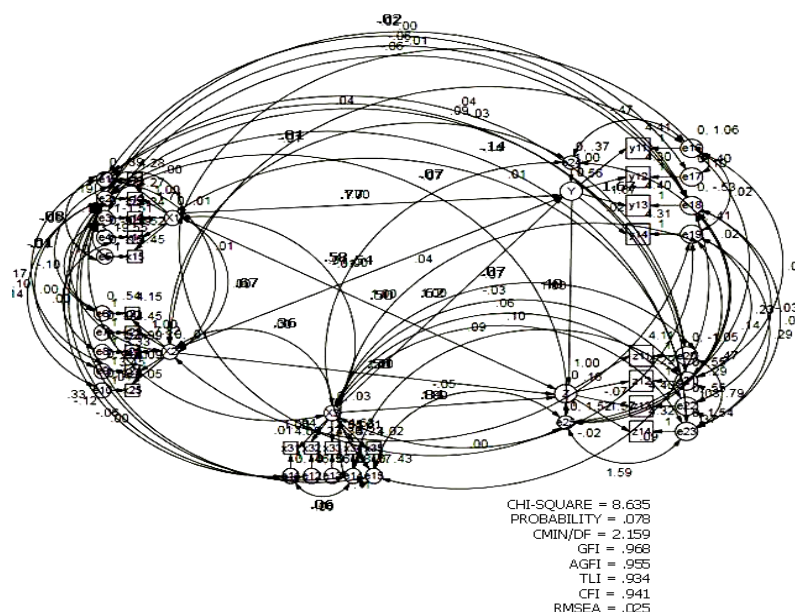


Figure 2: Second Phase Test Results

Table 1: Goodness-of-Fit Indices (GFI) Computing Results  
 Complete Model Phase I and Phase II

Criteria	Cut-off Value	Model Computing Results		Information
		Phase I	Phase II	
Chi-Square	Expected small	10.299	8.635	Good
Probability	$\geq 0,05$	0.065	0.078	Good
CMINDF	$\geq 2.00$	2.575	2.159	Good
GFI	$\geq 0,90$	0.953	0.968	Good
AGFI	$\geq 0,90$	0.975	0.955	Good
TLI	$\geq 0,90$	0.923	0.934	Good
CFI	$\geq 0,90$	0.930	0.941	Good
RMSEA	$\leq 0,08$	0.032	0.025	Good

Table 1 of the calculation results with the goodness of fit criteria of a model shown in the table above shows a good fit. Therefore, a decision can be made that the model describes the causal relationship between each of the variables tested and can be accepted and used for different purposes. Hypothesis testing in this research model is by t-test and comparing the critical ratio value (t-calculated) with a significance level of 5% alpha (alpha 0.05). The null hypothesis is accepted if the probability value ( $p$ )  $> 0.05$  means that the influence of the path between constructs is not significant. The alternative hypothesis is accepted if  $p < 0.05$ . The following are the results of the analysis of the influence between constructs in Table 2.

**Table 2: Result of Inter-Construct Influence Analysis**

Independent Variable on Dependent Variable	Standardized Regression Weights
X1 → Y	0.665
X2 → Y	0.447
X3 → Y	0.513
X1 → Z	0.399
X2 → Z	0.408
X3 → Z	0.732
Y → Z	0.791

Table 2 the influence between constructs in this study consists of direct effects and indirect effects. The analysis of direct, indirect, and total effects between constructs of the model can be compared to evaluate the effect of each construct on the immediate impact, which is none other than the coefficient of all coefficient lines with an arrow at one end, while the indirect effect is through an intervening variable. Total influence is the influence of various relationships. If the value of the direct influence of a path is equal to the value of the total effect, it means that there is no intermediate variable in that path. The results of the direct effects test, indirect effects, and total effects are shown in Table 3 due to hypothesis testing by comparing the t-calculated value or critical ratio with the t-table value. If the value of t-calculated is greater than t-table, then the relationship between the variables is significant and can be analyzed further. This research model produces degrees of freedom = 3 (final model), the t-estimated value ( $\alpha = 0.05$ ) is 1.96.

**Table 3: Research Hypothesis Testing Results**

HIP	Independent Variable	Dependent Variable	Direct Effect			
			Standardized	CR	P-Value	Info
H1	Competence	Teacher Performance	.665	7.157	0.000	Significant
H2	Motivation	Teacher Performance	.447	4.534	0.000	Significant
H3	Learning environment	Teacher Performance	.513	5.366	0.000	Significant
H4	Competence	Education quality	.399	3.413	0.000	Significant
H5	Motivation	Education quality	.408	4.218	0.000	Significant
H6	Learning environment	Education quality	.732	6.547	0.000	Significant
H7	Teacher Performance	Education quality	.791	3.125	0.000	Significant
Indirect Effect						
	Independent Variable	Dependent Variable	Interdependent Variable	Standardized		Info
	Competence	Teacher Performance	Education quality	0.321		Significant
	Motivation	Teacher Performance	Education quality	0.188		Significant
	Learning environment	Teacher Performance	Education quality	0.104		Significant

## 4.2. Discussion

The overall ten-way significant model can be interpreted as follows: 1) competence has a significant positive effect on teacher performance with  $P = 0.000 < 0.05$  with a coefficient value of 0.665, this coefficient indicates that competencies in the form of pedagogical, personality, social and professional competencies support in improving performance teacher. 2) motivation has a significant positive effect on teacher performance with  $P = 0.000 < 0.05$  with a coefficient value of 0.447. This coefficient indicates the fulfillment of physiological needs, security, social, appreciation, and self-actualization support in improving teacher performance. The learning environment has a significant positive effect on teacher performance with  $P = 0.000 < 0.05$  with a coefficient value of 0.513. This coefficient indicates that the learning environment in curriculum, lesson plans, learning media, libraries, and sports facilities supports teacher performance improvement. 4) competence has a significant positive effect on the quality of education with  $P = 0.000 < 0.05$  with a coefficient value of 0.399. This coefficient indicates that teachers' competence supports improving the quality of education. 5) motivation has a significant positive effect on the quality of education with  $P = 0.000 < 0.05$  with a coefficient value of 0.408. This coefficient indicates that the high work motivation of teachers supports the improvement of the quality of education. 6) the learning environment has a

significant positive effect on the quality of education with  $P = 0.000 < 0.05$  with a coefficient value of 0.732. This coefficient indicates that the availability of a complete learning environment supports improving the quality of education. Teacher performance has a significant positive effect on the quality of education with  $P = 0.000 < 0.05$  with a coefficient value of 0.791. This coefficient indicates that teacher performance following quality, quantity, efficiency, and effectiveness supports improving the quality of education. As for the indirect effect, e.g., competence indirectly through teacher performance has a positive and significant impact on the quality of education with an indirect effect value of 0.321 with  $P = 0.000 < 0.05$ ; 2) indirect motivation through teacher performance has a positive and significant effect on the quality of education with an indirect effect value of 0.188 with  $P = 0.000 < 0.05$ ; the learning environment indirectly through teacher performance has a positive and significant effect on the quality of education with an indirect effect value of 0.104 with  $P = 0.000 < 0.05$ . Based on this description, it is supported by several theories, including the work result theory that the results achieved by human resources to attain goals are determined by the competence of human resources. This theoretical view is correlated with the value-added theory that competent human resources in their fields are human resources that have added value. Value added is often interpreted as pedagogical, personal, social, professional, and spiritual competence. This correlates with the potential theory that the potential of human resources cannot be separated from academic ability (scholastic), personality (personality), social interaction (social interaction), professional reliability (professional), and spiritual strength (spiritual action). Maslow's hierarchy of needs motivation theory states that humans are motivated to fulfill basic needs starting from the lowest ladder of psychological conditions, security, social interaction, and appreciation to self-actualization. The theory of motivation X and Y from Herzberg that in fulfilling their motivation, humans are faced with the existence of factors X and Y, namely intrinsic and extrinsic, including compensation, improvement of the learning environment, promotion of positions, work responsibilities, and mastery of work, in this case, related to the world of education including choices in dealing with the dynamics of the teaching and learning process in schools. The expectancy motivation theory from Vroom) that individuals need the motivation of expectations, achievements, and rewards (rewards) such as providing incentives (valence), opportunities to increase work competence (option), and the possibility of giving promotions or promotions (instrumentality). And McClelland's theory of achievement motivation that humans are motivated to achieve. The form of achievement motivation shown is the need to achieve goals, affiliation, and power. This means that teachers need inspiration in encouraging and encouraging themselves in dealing with work dynamics that require them to improve their performance. The quality of work is manifested by the performance that always considers the quantity of work. That is, the more work you do, the more you get a lot of work as capital to produce an advantage. Including the supporting theory, namely the result theory, states that the quality of work is an accurate result that needs to be maintained. Meanwhile, its relevance to the quality of education uses the general assumption theory that quality educators and learning produce educational excellence.

## 5. Conclusion

Competence affects teacher performance based on SEM analysis shows that the three independent variables consisting of competence, motivation and learning environment directly have a positive and significant effect on teacher performance as an intermediate variable and teacher performance on education quality. Including the indirect effect of positive and significant independent variables through teacher performance on the quality of education. This means that the better the competence of a person with high motivation along with a good learning environment, it directly affects the performance of teachers, including indirectly contributing to the quality of education.

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