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The Relationship between the Principal's Leadership, Teacher Competency, and the Academic Atmosphere towards Educational Productivity

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Abstract**—** *This research is motivated by the productivity of education produced by vocational schools that are considered still unsatisfactory. It is proven that there are still vocational schools that have not been able to pass all their students. The purpose of this study was to determine the relationship of principals' leadership, teacher competencies, and academic atmosphere to the productivity of education.*

The analysis used is multiple regression analysis. The population in this study were teachers at State Vocational High School 1, State Vocational High School 2, and State Vocational High School 3 Kota Sungai Penuh totaling 127 peoples. While the data collection techniques are using questionnaires and documentation.

The results showed that there was a positive and significant relationship between the leadership of the principal, teacher competency, and the academic atmosphere towards the productivity of the education simultaneously or partially. The independent variable has an influence on educational productivity by 65.5%, the remaining 34.5% is influenced by other factors not examined in this study. The most dominant factor affecting the productivity of education in this research is the leadership of the principal.

Keywords**—** *Principal leadership, teacher competence, academic atmosphere, and productivity of education.*

I. INTRODUCTION

Education is one of the most strategic factors and is a long-term investment. No wonder if developed and developing countries place education as a major milestone in building the nation and state, so does our country Indonesia. Of course, what is meant here is quality education.

One form of an effort to improve the quality of education is by increasing the quality, quantity, and quality of education itself. In increasing this, it can be started from the smallest educational organization, namely school. A school is a form of one educational institution in which one of its goals is to achieve national development goals. Resources in schools such as principals, teachers, students, and other support staff are the main factors in achieving the success of education goals in schools.

The thing that greatly influences success and success in organizations is one of the factors is leadership. Sondang P. Siagian (1985: 6) explains that it becomes the driving force and drives all human resources and resources (tools) that are already available in an organization, namely leadership. One of the basic tasks of a leader is to foster and maintain an environment in which humans in it can work hand in hand, work together and be compact, and can form a group that is organized to achieve goals that have been planned and set.

In his leadership, the principal also affected the work productivity of the teacher. In addition, the principal also acts as the teacher's supervisor. Where the teacher also acts as a leader, namely the leader in his class in the learning process directly. Mulyasa (2005: 97) states that as a leader in the classroom, the functions and roles that the teacher must carry out include motivators, managers, supervisors, educators, administrators, leaders, and innovators. These indicators or roles are carried out to improve and improve the atmosphere in the teaching and learning process. Improving and improving the quality of learning is its main priority. Of course also by improving the performance of teachers who implement it.

In carrying out their duties, a teacher must have competence. Competence is an important aspect in the form of abilities that every teacher must possess in carrying out their duties. Therefore productivity and quality of teacher performance must be able to display a professional attitude that is full of quality. Competence or ability that is owned by a teacher must reflect actions that can support them in carrying out their tasks in the way they are most mastered, not just running activities in a routine manner.

Syaiful Sagala (2000: 209) explains that teacher competence must have: (1) proficiency in seeing and resolving problems of education from the perspective of the world community; (2) competent and cooperative skills in cooperating with others according to the tasks and roles in a community group; (3) having a critical and systematic ability to think; and (4) the willingness to always develop intellectual skills in line with the guidance of the times that always change according to the progress of science and technology. Therefore, teacher competence will greatly influence the productivity of education.

One other factor that influences school productivity is the academic atmosphere. Improving the academic atmosphere is a factor that needs to be implemented to improve and improve the way students learn. Healthy interactions carried out by principals and teachers, teachers and students, fellow teachers, and fellow students will occur if the academic atmosphere is conducive. If it runs conducively, the academic atmosphere will guarantee the creation of pleasure and create creativity and motivation that overflows among students and instructors while undergoing learning activities that are expected to be able to produce quality academic graduates.

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The academic atmosphere is also known as the school work climate. Supardi (2013: 121) states that the work climate school is the atmosphere that is contained and overshadowed in a school. The work climate at the school presents an atmosphere where the school residents are happy, cheerful, and happy and caring for each other.

Vocational secondary schools in Sungai Penuh City are determined as research sites because in this city there are many vocational schools, but only three SMKs are taken, namely State Vocational High School 1, State Vocational High School 2, and Sungai Penuh City 3 Vocational School supported by sufficient numbers of teachers. needs in this study. All active PNS teachers will be included in this study as research subjects.

Vocational High School 1, Vocational High School 2, and Vocational High School 3 Kota Sungai Penuh have competent teachers in the fields they provide and are graduates from well-known universities in Indonesia. The school teachers were also often invited to be judges in the race and managed to guide their students to win the inter-school race at the provincial level. So, with these achievements, the teachers in SMK 1, 2 and 3 should have and master the competencies of the teacher well. However, in one school, in the 2017/2018 school year, there were those who did not succeed in graduating all of their 12th-grade students. This certainly invites questions.

In connection with the data and explanations above, this study has a purpose and intends to analyze and find out the relationship between principals' leadership, teacher competency, and academic atmosphere on educational productivity.

II. Research Method

In this study, research carried out in the form of field research. Field Research is research carried out by collecting and processing information and data obtained directly from respondents who take part and observe it directly.

This study uses a quantitative method and uses a correlational method, in order to see the magnitude of the relationship between principals' leadership, teacher competency, and the academic atmosphere towards educational productivity.

The method of data collection in this study is observation and questionnaire. In an effort to obtain the accuracy of the data collected, the research instrument (questionnaire) was tested for accuracy using validity and reliability tests. Validity test is done by correlating the variable scores, using the Pearson Product Moment formula with the help of SPSS version 18 for Windows. Whereas to test reliability is done using Cronbach Alpha technique with the help of SPSS 18 for windows.

To analyze the effect of independent variables on the dependent variable of this study using multiple regression analysis techniques.

To test the effect of variables X1, X2, X3, simultaneously on the Y variable, the F test was used. The F test was also carried out with the help of the SPSS 18 software program for Windows. The hypothesis testing criteria using a significance level of α = 5%, is if the price of F count> F table then Ho is rejected and Ha is accepted.

To test the effect of each variable X on the variable Y partially used the t-test. The t-test was carried out with the help of the SPSS 18 software program for Windows. If t count > t table then Ho is rejected and Ha is accepted.

III. Research Result & Discussion

1. First Hypothesis

The hypothesis proposed is that there is a significant and positive relationship between principals' leadership and educational productivity. From the results of a simple linear regression that has been carried out on the research data, the results of the analysis of the relationship between the leadership of the principal and educational productivity are obtained as follows:

Variabel	Koefisien Regresi	Constanta	Stndr. Error	t			Hipotesis	
X1	0,572	37.550	0,039	Hitung	0,05	0,025	H0	Ha
				14.507	1.6573	1.9794		√

Based on the results of a simple regression analysis of the research data obtained a regression coefficient of 0.572 and a constant of 37.550 thus the form of the relationship between the two variables can be presented in the regression equation Ý = 37,550 + 0.624X1.

To determine the degree of linearity and the significance of the regression equation, it is necessary to carry out the F. test. The F test is illustrated in the following table:

Model	Unstandarized Coefficients		df	F Hitung	F tabel	Sig.
	B	Std. error				
(Constant)	37.550	5.699	1	210.454	2.678	.000a
Kepemimpinan	.572	.039	125			

It can be seen that Fcount 210.454> F table 2.678 at α = 0.05. Thus the regression equation model can be used to predict with the meaning that if the leadership of the principal is increased by one score, then the productivity of education will increase by 0.572 scores on the constant 37,550.

Furthermore, the correlation analysis of the principal's data on education productivity produces a product-moment correlation coefficient of rxy = 0.792 with t of 14.507 as shown in the following table:

Korelasi antara	koefisien Korelasi (ry1)	koefisien Determinasi r^2	t hitung	t tabel	
				α = 0.05	α = 0.01
X1 dan Y	0.792	0.627	14.507	1.6573	2.3570

From the table it can be revealed that the correlation coefficient rxy = 0.792 is significant (t count 14.407> t table 1.6573 at α = 0.05). Thus there is a relationship and contribution of the principal's leadership to the productivity of Education.

With a coefficient of determination of 0.627, it means that the contribution of the principal's leadership variable to Education productivity is 62.7%.

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2. Second Hypothesis

The hypothesis proposed is that there is a significant and positive relationship between teacher competence and educational productivity. From the results of a simple linear regression that has been carried out on the research data, the results of the analysis of the relationship between teacher competencies and educational productivity are obtained as follows:

Variabel	Koefisien Regresi	Contanta	Stndr. Error	t			Hipotesis	
X2	0.295	77.775	0.101	Hitung	0.05	0.025	H0	Ha
				2.907	1.6573	1.9794		√

Based on the results of a simple regression analysis of the research data obtained a regression coefficient of 0.295 and a constant of 77.775 thus the form of the relationship between the two variables can be presented in the regression equation Ý = 77.775 + 0.295X2

To determine the degree of linearity and the significance of the regression equation, it is necessary to carry out the F. test. The F test is illustrated in the following table:

Model	Unstandarized Coefficients		df	F Hitung	F tabel	Sig.
	B	Std. error				
(Constant)	77.775	14.526	1	8.450	2.678	.004a
Kepemimpinan	.295	.101	125			

It can be seen that F count 8.450> F table 2.678 at α = 0.05. Thus the regression equation model can be used to predict with the meaning that if teacher competency is increased by one score, then education productivity will increase by 0.295 scores on the constant 77.775.

Furthermore, the correlation analysis of teacher competency data on Educational productivity produces a product-moment correlation coefficient of rxy = 0.252 with t of 2.907 as shown in the following table:

Korelasi antara	koefisien Korelasi (ryl)	koefisien Determinasi r^2	t hitung	t tabel	
				α = 0.05	α = 0.01
X1 dan Y	0.252	0.063	2.907	1.6573	2.3570

From the table it can be revealed that the correlation coefficient rxy = 0.252 is significant (t count 2.907> t table 1.6573 at α = 0.05). Thus there is a relationship and contribution of teacher competence to the productivity of Education.

With a coefficient of determination of 0.063, it means that the contribution of teacher competency variables to Education productivity is 6.3%.

3. Third Hypothesis

The hypothesis proposed is that there is a significant and positive relationship between the academic atmosphere and educational productivity. From the results of a simple linear regression that has been carried out on the research data, the results of the analysis of the relationship between the academic atmosphere and educational productivity are obtained as follows:

Variabel	Koefisien Regresi	Contanta	Stndr. Error	t			Hipotesis	
X1	0,572	37.550	0,039	Hitung	0.05	0.025	H0	Ha
				14.507	1.6573	1.9794		√

Based on the results of a simple regression analysis of the research data obtained a regression coefficient of 0.132 and a constant of 103.049 thus the form of the relationship between the two variables can be presented in the regression equation Ý = 103.049 + 0.132X3.

To determine the degree of linearity and the significance of the regression equation, it is necessary to carry out the F. test. The F test is illustrated in the following table:

Model	Unstandarized Coefficients		df	F Hitung	F tabel	Sig.
	B	Std. error				
(Constant)	103.049	10.073	1	2.852	2.678	.004a
Kepemimpinan	.132	.078	125			

It can be seen that F count 2.852> F table 2.678 at α = 0.05. Thus the regression equation model can be used to predict with the meaning that if the academic atmosphere is increased by one score, then education productivity will increase by 0.132 scores on the constant 103.409.

Furthermore, the correlation analysis of academic atmosphere data on Educational productivity produces a product-moment correlation coefficient of rxy = 0.149 with t of 1.683 as shown in the following table:

Korelasi antara	koefisien Korelasi (ryl)	koefisien Determinasi r^2	t hitung	t tabel	
				α = 0.05	α = 0.01
X1 dan Y	0.149	0.022	1.683	1.6573	2.3570

From the table it can be revealed that the correlation coefficient rxy = 0.022 is significant (t count 1.683> t table 1.6573 at α = 0.05). Thus there is a relationship and contribution of the academic atmosphere to the productivity of Education.

With a coefficient of determination of 0.022, it means that the contribution of teacher competency variables to Educational productivity is 2.2%.

4. Fourth Hypothesis

The hypothesis proposed is that there is a significant and positive relationship between the leadership of the principal, teacher competence, and the academic atmosphere together towards educational productivity. Based on the results of multiple regression analysis of data between principals' leadership (X1), Teacher Competence (X2), and academic atmosphere (X3) Together towards Education productivity (Y) resulted in multiple regression direction coefficients of 0.553 for X1, 0.141 for X2 and 0.104 for X3, and constants of 6.624. Thus, the form of the relationship between the four variables can be expressed by the multiple regression equation Ý = 6.624 + 0.553X1 + 0.141X2 + 0.104X3. This equation model implies that if the principal leadership together, teacher competency and academic atmosphere are increased by one score, then there will be a tendency to increase Education productivity by 0.798 scores with a constant of 18.657. (0.798

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obtained from 0.553 + 0.141 + 0.104).

The results of the testing of multiple regression equations can be seen in the following table:

Model	Unstandarized Coefficients		R	R Square	df	F Hitung	F tabel	Sig.
	B	Std. error						
(Constant)	18.657	10.817	.809	.655	3 123 126	77.818	3.9449	.000a
Kepemimpinan	.553	.039						
Kompetensi guru	.141	.063						
Suasana akademik	.104	.047						

Based on the results of the analysis of variance as has been done and shown in the table as a whole the multiple linear regression equation obtained fcount = 77.818> ftabel = 3.9449, at the significance rate α = 0.01. this shows that the multiple regression model is very significant.

This finding rejects the null hypothesis, namely that there is no jointly positive relationship between principals' leadership (X1), teacher competence (X2), and academic atmosphere (X3) on Education productivity (Y). So Ha is accepted, that is, there is a positive relationship together between the principal's leadership (X1), teacher competence (X2), and academic atmosphere (X3) on Education productivity (Y).

From the table above, it can also be seen that the multiple correlation coefficient (R) is 0.809, and the value of the R Square value is 0.655. So it can be concluded that the contribution of the relationship from the independent variables, namely the leadership of the principal, teacher competence, and the academic atmosphere towards educational productivity is 65.5%. While the remaining 34.5% is influenced by other factors not examined.

IV. CONCLUSION

First, looking at the relationship between the leadership of the school principal and the productivity of education, there is a significant and positive relationship between the two variables. The acceptance of the working hypothesis which states that there is a significant and positive relationship between the leadership of the principal and the productivity of education implies that, the better the leadership of the principal, the better the productivity produced. Because the principal is an important figure who is the leader of the school that regulates all forms of activities that take place in the school. Through the results of data processing, the determination coefficient is 0.627, and it is also obtained if the leadership of the principal is increased by one score, then the productivity of education will increase by 0.572 scores.

Second, the acceptance of the working hypothesis which states that there is a significant and positive relationship between teacher competence and educational productivity. Through data processing, the determination coefficient is 0.063, this means that the contribution of teacher competency variables to Education productivity is 6.3%. From the results of the data obtained also if the teacher's competence is increased by one score, then the productivity of education will increase by 0.295 scores. This means that the broader and more competent the teacher's competencies, the better the productivity will be.

Third, the acceptance of the working hypothesis which states that there is a significant and positive relationship between the academic atmosphere and educational productivity. Through data processing, the determination coefficient is 0.022, meaning that the contribution of the academic atmosphere variable to Education productivity is 2.2%. From the results of data processing, it was also found that if the academic atmosphere was increased by one score, then the productivity of education would increase by 0.132. this implies that if the academic atmosphere is created and formed conductive, education productivity will also increase.

Fourth, the results in this study show that the contribution of the relationship from the Leadership of the school Principal, Teacher Competence, and the Academic atmosphere together on educational productivity is 63.4% (the rest are other variables not examined). High percentage. This illustrates if the three variables are able to go hand in hand and directed, then the productivity of education will be realized in accordance with the expectations of the goals, vision, and mission that have been designed.

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