

# IMPROVE TEACHER CREATIVITY THROUGH LEADERSHIP AND PRINCIPALS MANAGEMENT

**Onisimus Amtu, IAKN Ambon, Indonesia**  
**Agusthina Siahaya, IAKN Ambon, Indonesia**  
**Jeditia Taliak, IAKN Ambon, Indonesia**

## ABSTRACT

*The low quality of learning in schools is often associated with teacher creativity. They become the determinant of the success of the learning interaction process because they are considered to have certain competencies and of course master their fields. Even so, the teacher also needs support from the principals through professional leadership and management that encourages the achievement of educational quality. This study aims to examine whether there is influence of principals and management principals of teacher creativity. The results showed the influence of the principal's leadership on teacher creativity by 46.7%, the influence of the principal's management on teacher creativity by 58.9%, and the effect of principals' leadership and management together on teacher creativity by 59%.*

**Keywords:** Teacher Creativity, Leadership, Principal Management

## INTRODUCTION

In recent years, creativity has become a topic of increasing interest in the educational environment. Developing creativity is increasingly seen as an educational necessity because it encourages the performance of individual students and influences their future success (Castillo-Vergara, 2018). The category of teacher creativity according to Gary, namely sensitivity to problems; flexibility in finding alternative solutions to problems; fluency, freedom in thinking and acting; originality and novelty; preparation and development; and redefinition (Timpe, 1992). But lately the creativity of teachers has begun to get a sharp spotlight because it is characterized by the emergence of several phenomena in schools namely: teachers lack enthusiasm in completing their tasks related to learning devices; there are still teachers who do not have a good teaching program; teacher's creativity in choosing learning strategies and methods; and there are still teachers who prioritize their personal interests rather than carrying out their duties as a teacher (Gusman, 2014).

This has to do with the leadership role of the principal. One of the important factors of education management but still less touched in the education development program is the leadership of the principal. No matter how much schooling input is added or improved, the output will still not be optimal, if the principal's leadership factor, which is a very strategic aspect in the teaching and learning process, is not given adequate attention (Ekosiswoyo, 2007). In the view of Wong & Davey (2007) the main challenge of education leadership is how to develop talented people in the organization by creating a positive work climate and providing opportunities for innovation and taking risks to deal with uncertainty in the future (Handoyo, 2011). This study aims to identify the influence of the principal's leadership variables on teacher

creativity. The effect of the principal management variable on teachers' creativity and the influence of the leadership and management of the principal together on teacher creativity supported by various theories. In the context of educational leadership, this kind of research has been carried out a lot, but the condition of each school certainly has a different value contribution. Therefore, this study will benefit several parties in evaluating the performance of principals such as local government, education authorities and school.

## **LITERATURE REVIEW AND CONCEPTUAL MODEL**

The teacher is a source of information that is trusted by the truth and is responsible for what is conveyed and its impact on their students and society in general (Amtu, 2016). Therefore, the teacher must be able to manage the learning process that is active, creative and fun (Iriyani, 2008). Accurate assessment of idea creativity is seen as an important component that underlies creative performance, and seems to be relevant to supporting the creativity of others effectively (Benedek et al., 2016). Filsaime (2008) characterizes creative thinking namely; fluency, flexibility, authenticity or originality and detailing or elaboration (Fauziah, 2011). But reality shows that there are teachers who are passionate and full of responsibility and there are also teachers who do the work without being based on a sense of responsibility, besides that there are also teachers who often skip, come in time and disobey orders (Sulistiya, 2013).

### **Improve Teacher Creativity**

Building creativity turns out to be a complex endeavor, characterized by several factors that can be adjusted and influenced (Jónsdóttir, 2017). Creativity and creative personality beliefs are predictors of behavior fostering teacher creativity (Chan & Yuen, 2014). Teacher teaching behavior itself plays an important role in encouraging student creativity (Soh, 2017). The preferred approach to facilitating creative teaching includes the use of forms of art and play activities, and the formation of a stimulating classroom environment for creative ideas (Wang & Kokotsaki, 2018). The characteristics or characteristics of creative teachers according to Pardamean (Oktavia, 2014) include: flexible, optimistic, respectful, deft, humorous, inspirational, gentle, disciplined, responsive, and empathetic. Teacher's creative thinking needs to be developed continuously, considering the learning tools compiled by the teacher are one of the keys to the successful implementation of learning in the classroom (Husain, 2011). Creative learning is about the teacher's personality, personal creativity, and its manifestations in daily practice (Lapeniene & Dumciene, 2014). Several recent studies have shown that there are fundamental problems that hinder teacher creativity. Even though teachers value creativity, their concept of creativity is not informed by theory and research on creativity. The teacher feels not ready to grow or identify creativity in his class; they equate creativity with art (Mullet et al., 2016). The teacher holds a number of possible beliefs and many of which hinder the development of creativity in school (Bereczki & Karpati, 2018). Learning is often monotonous, less attractive and less motivating, and tends to lead to passivity in students (Oktavia, 2014). The creativity aspect of the teacher in an effort to create learning is hampered (Suryana, 2012). Teachers do not seem to have a limited view of who can be creative or that creativity always produces products; however, some teacher conceptions are too vague to guide creativity that facilitates explicitly (Rubenstein et al., 2018). In this case, the behavior of the principal must be

able to encourage teacher performance by showing a sense of friendliness, close and full of consideration for the teachers both as individuals and as a group (Triyanto et al., 2013).

Why? Because there is a positive and significant influence of principals' leadership and teacher professionalism on increasing creativity (Bahri, 2010). There is also an influence between creativity and teacher productivity (Zuliawati, 2016). The creativity of the teacher will support the learning process because every word that comes out of the mouth of a teacher, for a student is knowledge (Amtu, 2011). The strategy is to provide motivation to the teacher can consist of giving awards that can foster initiative, creative abilities, and the spirit of healthy competition (Iskandar, 2013). Skills, attitudes, teachers "*willingness to act as role models, awareness of learners*" needs, flexible structure of learning, certain types of classroom interactions are important for learning creativity (Davies et al., 2014). This idea is important because the key to the success of creative development lies in teaching creatively and efficiently in conducive interactions (Oktavia, 2014). Creativity must be encouraged for problems that occur in the organization and individual differences in members must be respected (Cetin & Kinik, 2015). Teacher's creativity in learning must be characterized by criteria; has a great curiosity when teaching, has an intuitive nature, has a flexible nature, has a humorous nature, has an inspirational nature, and has empathic properties (Matsum & Ulfah, 2013).

### **Principal Leadership and Teacher Creativity**

In recent years, there has been increased interest in developing leadership in organizations and education (Riggio, 2016). As an organization, schools are at the forefront of the development of education in Indonesia, so the leadership of principals is an important indicator that is always used as a benchmark for the success of education (Amtu, 2015). Leadership, basically, is not only the quality of individuals that is enhanced, but the way to be and act positively connects them with others, making it possible to establish cooperation, assistance and other growth in themselves (Romero-Iribas & Martínez-Priego, 2011). Schools that idealize progress and development progressively require leadership that truly plays its role and function professionally (Amtu, 2015). The principal is a functional teacher who is given the task of leading a school where there is a teaching and learning process or a place where there is interaction between the teacher who gives lessons and students who receive lessons (Wahjosumidjo, 2001).

In this case the role of the principal must be driven in such a way in accordance with his role in improving the quality of education as a manager so that it can influence the teacher staff, both directly and indirectly (Rosyadi & Pardjono, 2015). Conscious leadership helps change educational institutions to reflect the highest values (Jones & Brazdau, 2015). Inclusive leadership as a set of positive leader behaviors that facilitate members to feel that they have a working group while maintaining their uniqueness in the group because they fully contribute to group processes and outcomes (Randel et al., 2018). The study of principals leadership shows that principals leadership skills have a positive and significant effect on teacher performance with a correlation coefficient of 0.499 with a contribution of 0.240 or 24% (Sukendar, 2013). There is a significant positive influence between principals' leadership, work motivation and school culture together on teacher performance (Setiyati, 2014). Principal leadership has a significant effect on teacher performance by 22.90%. However, it should be noted also that the leadership role in schools has not been done well.

Research on the performance of principals in Ireland, for example, shows that most elementary school principals are very dissatisfied and feel stressed about their work. Regression analysis revealed that job satisfaction and work stress are related to complex personal characteristics, working conditions, school context and teacher climate (Darmody & Smyth, 2016). Reflecting on the reality in schools in each region, of course many principals still do not carry out their duties and functions as educational leaders (Fitrah, 2017). Leadership focused only on completing tasks is not enough to achieve optimal results (Cummings et al., 2018). School is an organization. Because it is worth studying, as is the duty of the senior administrator, because his job is to make educational resources effective (Brown, 1964). A school principal expressed his belief as an individual vital organism in school, as an education unit and the need for greater flexibility in school mastery (Hone, 1969).

### **Principal Management and Teacher Creativity**

Creativity is one indicator of quality human beings. Creativity and ability to innovate in schools can be formed and built into a good management framework. How do principals, especially as education leaders build and develop an institutionalized and sustainable creative culture (Yuliana, 2007). If in a school all teachers, students are involved and interact well, a pleasant working atmosphere, mutual respect, mutual respect, it will greatly influence the overall school life (Sagala, 2013). Because leadership is a quality management principle, it must be understood its importance for education, the difference between leadership and management, efficient communication in leadership and the difference between competition and collaboration (Crețu, 2015). The same thing was emphasized by Wagner regarding three managerial skills that must be possessed by a principal, namely; conceptual skills; technical skills; and human relations skills (Kempa, 2015).

David & Newstrom view conceptual skills as thinking ability and interpret various terms, frameworks on many things. In this first sense it can be seen that the skill in question is more oriented to one's cognitive abilities (Kempa, 2015). Technical skills related to compiling an accountability report; compile a written program; create school statistics; make decisions and realize them; type; organize space; and making letters (Danim, 2008). Human skills according to (Wahjosumidjo, 2001) include: the ability to understand human behavior and the collaborative process; the ability to understand the heart's contents, attitudes and motives of others, why they say and behave; the ability to communicate clearly and effectively; the ability to create effective, cooperative, practical and diplomatic cooperation; and able to behave acceptable (Karweti, 2010). Research on distributed leadership both at the teacher and school level is presented as significant, positive, and has a direct and indirect effect on teacher job satisfaction and has an indirect effect on mediated job satisfaction and the success of a teacher (Sun & Xia, 2018). There is a significant and positive influence between the principal's managerial abilities on school management effectiveness by 60.6% and the rest influenced by other variables (Salim, 2017).

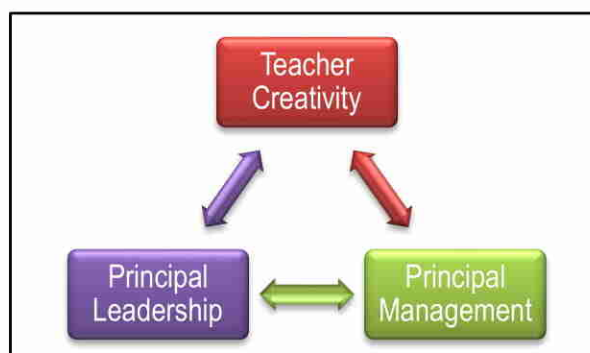
### **Conceptual Model**

The theory used in this study is management, leadership and creativity. As a foundation for developing professional school management, a school principal needs to consider the aspects developed by (Sallis, 2006) namely exemplary; active participation of all parties; smart, good



mental, excellent physical; quality oriented based on job satisfaction; compromise to reach an agreement; the dynamics of top down management and bottom up; instill a culture of team work well; and attention and appreciation to creative employees. In addition to these aspects, the assessment of the implementation of principal tasks is absolutely assessed according to the required performance indicators, namely decision making; division of tasks to subordinates; subordinate initiative; sanction or punishment; awarding achievements; establish communication; monitoring the implementation of tasks; and work meetings (Danim, 2008). This review of the theoretical basis will enable the principal to develop his teacher to master the forms, methods, and means of teaching activities that ensure the development of creative personality traits, as well as additional motives, qualities and personal abilities that contribute to successful creative processes (Zivitere et al., 2015).

Because the leadership style provides a great opportunity for teachers to develop their potential to the maximum extent possible with the support of all parties, both internal and external (Baharun, 2018). This is the main reason why teacher creativity requires leadership that encourages the formation of ideas and encourages the realization of ideas (Lukoschek et al., 2018). Robinson (2011) views a creative teacher not only to convey information received, but what the teacher also does is guiding, stimulating, provoking, and involving enthusiasm, energy, and encouraging students (Zhang et al., 2018). Therefore, it is necessary to prepare environmentally enriched learning by using various learning approaches, methods and techniques with appropriate planning and application for the development of scientific creativity (Demir & Sahin, 2014). Creativity can be measured in six main aspects, namely: sensitivity to problems; flexibility in finding alternative solutions to problems; fluency, freedom in thinking and acting; desire and novelty; preparation and development; and redefinition (Timpe, 1992). Figure 1 presents a conceptual model of increasing teacher creativity through the leadership and management of the principals.



**FIGURE 1**  
**CONCEPTUAL MODEL OF TEACHER CREATIVITY THROUGH PRINCIPAL LEADERSHIP AND MANAGEMENT**

Teacher creativity must actually be shown in terms of ability: creating the ability of class dimensions; build capacity dimensions; secure environmental dimensions; expand the dimension of vision; unite and minimize the dimension of crisis; and look for and map the dimensions of improvement (Ngang, 2012). Besides the teacher's factor, it turns out that the leadership and management of the principal have not been maximally implemented. This was marked by the

principal not giving encouragement to work towards the teacher; lack of opportunity to consult; lack of direction for work to be done by the teacher; and lack of attention to the difficulties experienced by teachers in completing their tasks (Gusman, 2014). Teacher's creativity requires the managerial role of the principal. As a manager, the principal also plays an important role in establishing a conducive atmosphere and good social life in the school environment (Utami, 2014). Several dimensions of principals leadership contribute significantly to school capacity and teacher professional learning (Li et al., 2016). The overall research hypothesis that guides this study is as follows:

- H1: There is a significant influence between the principal's leadership and teacher's creativity.*
- H2: There is a significant influence between the management of the principal and the teacher's creativity.*
- H3: There is a significant influence between the principal's leadership and the principal's management together with the teacher's creativity.*

## METHODOLOGY

### Research Variables

This type of research is correlational with the type of survey using three variables, namely the principal's leadership, principal management and teacher creativity. This study tried to design a five-point Likert type questionnaire as suggested (Sugiyono, 2008). The creativity variable of the teacher measures how sensitive the problem is; flexibility in finding alternative solutions to problems; fluency, freedom in thinking and acting; originality and novelty; preparation and development; and redefinition (Timpe, 1992). Principal leadership variables measure how the implementation of the decision-making function; division of tasks to subordinates; subordinate initiative; sanction or punishment; awarding achievements; establish communication; monitoring the implementation of tasks; and work meetings, suggested (Danin, 2008). Principal management variables measure how exemplary; active participation from all parties; smart, good mental, prime physical; quality-oriented based on job satisfaction; compromise to reach agreement; top down management dynamics and bottom up; instill team work culture well; and attention and appreciation to creative employees suggested by Sallis (2006). The research hypothesis is in the form of a directional hypothesis because it states relationships, correlations, influences and differences between two or more variables (Hermawan, 2009).

### Population and Sample

The population in this study according to its type is a limited population and according to its nature is a homogeneous population (Brahmasari, 2009). The population in this study were all subject teachers in private and public junior high schools namely SMP Negeri 1, SMP Negeri 14, SMP Negeri 6, SMP Kristen YPKPM dan SMP Al-Hilal in Ambon City in Sirimau District, Ambon City. The population in this study were 216 teachers. The sampling technique used in this study is proportional random sampling. Sampling in proportion is done by taking subjects from each strata or each region is determined to be balanced by the number of subjects in each

strata or region, as suggested by Arikunto (2006). The number of samples from the population of each school in Sirimau District, Ambon City is presented in Table 1 below.

| <b>Table 1</b><br><b>THE NUMBER OF SAMPLES FROM THE POPULATION OF EACH SCHOOL</b> |                   |                    |                             |                    |
|-----------------------------------------------------------------------------------|-------------------|--------------------|-----------------------------|--------------------|
| No.                                                                               | School Name       | Population         | Calculation                 | Sample             |
| 1                                                                                 | SMP Negeri 1      | 47                 | $\frac{47}{216} \times 140$ | 30                 |
| 2                                                                                 | SMP Negeri 14     | 66                 | $\frac{66}{216} \times 140$ | 43                 |
| 3                                                                                 | SMP Negeri 6      | 72                 | $\frac{72}{216} \times 140$ | 47                 |
| 4                                                                                 | SMP Kristen YPKPM | 24                 | $\frac{24}{216} \times 140$ | 15                 |
| 5                                                                                 | SMP Al-Hilal      | 7                  | $\frac{7}{216} \times 140$  | 5                  |
| <b>Total</b>                                                                      |                   | <b>216 teacher</b> |                             | <b>140 teacher</b> |

### **Data Collection Technique and Validity Testing and Reliability of Research Instruments**

Primary data collection is done by distributing questionnaires directly to as many as 140 teachers. While secondary data collection is done by collecting various planning documents and implementing work programs, work agendas and policies for each school principal. In addition, documents were also collected on the principal's performance, teacher's performance and achievements of student learning achievements and other supporting documents. Validity test is used to test whether the question in a questionnaire is able to reveal something that will be measured by the questionnaire. The way is by correlating between certain statement scores with a total score of attitude scale. Reliability test is one of the ways that can be done to test the extent to which measurements give a stable stable results if measurements are taken again (Desianty, 2005). The validity of the instrument in this study was tested by calculating the Pearson correlation from the score of each question item with its total score. While for reliability using Alpha Chronbach > 0.60 (Brahmasari & Suprayetno, 2009). After collecting data, this research tests the validity and reliability using sample data to provide more accurate estimates (Yanto, 2017).

### **Data Analysis**

This study uses descriptive data analysis and inferential analysis. The purpose of the data analysis was to identify the influence of the principal's leadership, school management, and teacher creativity in Ambon City. For this purpose, the mean, median, mode, standard deviation, range, minimum score, and maximum score will be calculated. The score category is needed to calculate the interval class. Furthermore, the calculation of score and interval classes, used Methods of Grading in Sumative Evaluation suggested by Bloom, Madaus & Hastings (Ratumanan, 2011) as presented in Table 2 below.

| <b>Table 2</b><br><b>BENCHMARK REFERENCE ASSESSMENT CRITERIA</b> |        |               |
|------------------------------------------------------------------|--------|---------------|
| Grade ( % )                                                      | Letter | Qualification |
| $90 \leq x$                                                      | A      | Very high     |
| $75 \leq x < 90$                                                 | B      | High          |

|                  |   |          |
|------------------|---|----------|
| $60 \leq x < 75$ | C | Is being |
| $40 \leq x < 60$ | D | Low      |
| $x < 40$         | E | Very low |

Inferential analysis is used to test the research hypothesis in the form of a simple linear regression test and multiple regression. Before testing the hypothesis, a prerequisite test will be carried out first, namely (a) data normality test; by using the One Sample Kolmogorov-Smirnov calculation formula, with  $\alpha=5\%$ . The results of the normality test can be known the significance value if the variable significance value ( $X_1$ ,  $X_2$  and  $Y$ ) is greater than 0.05, which means that  $H_0$  is accepted, it can be concluded that the data comes from populations that are normally distributed; (b) linearity test; to show the value of  $F$  and  $\text{sig}=0.00$ , the value of  $\text{sig}$  is 0.00 that is with a significance value of  $0\% < 5\%$  means that  $H_0$  is rejected and  $H_1$  is accepted; and (c) multicollinearity test; using the criterion (1) if indigo VIF around number 1 or has tolerance close to 1, it is said that there is no multicollinearity problem in the regression model; (2) if the correlation coefficient between independent variables is less than 0.5, there is no problem of multicollinearity.

## RESULTS

### Descriptive Analysis

Descriptive analysis shows that the principal leadership variable obtained a mean of 128.75, a standard deviation of 5.200, a variance of 27.036. The principal management variable obtained a mean value of 128.57, a standard deviation of 6.406, a variance of 41.036. The teacher creativity variable obtained a mean of 128.51, a standard deviation of 8.155 and a variance of 66.509. Table 3 provides a more detailed explanation of the data about the results of the descriptive analysis.

| Table 3<br>DESCRIPTIVE STATISTICS |     |       |         |         |       |        |                |          |
|-----------------------------------|-----|-------|---------|---------|-------|--------|----------------|----------|
|                                   | N   | Range | Minimum | Maximum | Sum   | Mean   | Std. Deviation | Variance |
| Principal Leadership ( $X_1$ )    | 140 | 21    | 119     | 140     | 14162 | 128.75 | 5.200          | 27.036   |
| Principal Management ( $X_2$ )    | 140 | 29    | 116     | 145     | 14143 | 128.57 | 6.406          | 41.036   |
| Teacher Creativity ( $Y$ )        | 140 | 43    | 110     | 146     | 14136 | 128.51 | 8.155          | 66.509   |
| Valid N (listwise)                | 140 |       |         |         |       |        |                |          |

### Test the Research Hypothesis

Testing the hypothesis of the influence of the principal's leadership on the creativity of teachers using simple regression analysis with the help of the SPSS 20.0 for windows program. As described in the form of the following coefficient table.

| Table 4<br>COEFFICIENTS <sup>a</sup> |                             |            |                           |   |      |
|--------------------------------------|-----------------------------|------------|---------------------------|---|------|
| Model                                | Unstandardized Coefficients |            | Standardized Coefficients | t | Sig. |
|                                      | B                           | Std. Error | Beta                      |   |      |



|   |                           |       |        |      |       |      |
|---|---------------------------|-------|--------|------|-------|------|
| 1 | (Constant)                | 9.559 | 14.191 |      | 674   | .502 |
|   | Principal Leadership (X1) | 1.072 | .110   | .684 | 9.737 | .000 |

a: Dependent Variable: Teacher Creativity (Y).

From the analysis of the Table 4, the value  $(b_1)=9.559$  and  $b_0=1.072$  is obtained, so that the simple linear regression equation formed is  $\hat{Y}=9.559+1.072X_1$ . It was concluded that because  $H_0$  is rejected and  $H_a$  is accepted, it can be said that there is a significant effect of the principal's leadership on teacher creativity. Simple linear coefficient test based on the above Coefficient table obtained  $t_{\text{count}} > t_{\text{table}}$  or  $9.737 > 1.65$  means that there is an influence of the principal's leadership on teacher creativity. Furthermore, the correlation coefficient is obtained by observing the Summary Model presented in Table 5 below.

| Table 5<br>MODEL SUMMARY <sup>b</sup> |                   |          |                   |                            |                   |          |     |     |               |
|---------------------------------------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| Model                                 | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics |          |     |     |               |
|                                       |                   |          |                   |                            | R Square Change   | F Change | df1 | df2 | Sig. F Change |
| dimension0 1                          | .684 <sup>a</sup> | .467     | .463              | 5.979                      | .467              | 94.814   | 1   | 138 | .000          |

a. Predictors: (Constant), Principal Leadership (X1).  
b. Dependent Variable: Teacher Creativity (Y).

The conclusion of the analysis of the table above shows the existence of a correlation coefficient of  $R=0.684$  and a determination coefficient of 0.467 or 46.7%. So that it can be concluded that 46.7% of the creativity of teachers can be influenced by school leadership while the remaining 53.3% influence by other factors. Testing the hypothesis of the influence of principal management on teacher creativity using simple regression analysis using the help of the SPSS 20.0 for windows program. As described in the form of the following coefficient table below.

| Table 6<br>COEFFICIENTS <sup>a</sup>          |                           |                             |            |                           |        |      |
|-----------------------------------------------|---------------------------|-----------------------------|------------|---------------------------|--------|------|
| Model                                         |                           | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|                                               |                           | B                           | Std. Error | Beta                      |        |      |
| 1                                             | (Constant)                | 2.897                       | 10.111     |                           | .286   | .775 |
|                                               | Principal Management (X2) | .977                        | .079       | .767                      | 12.439 | .000 |
| a. Dependent Variable: Teacher Creativity (Y) |                           |                             |            |                           |        |      |

From the analysis of the Table 6, the values  $(b_1)=2.897$  and  $b_0=0.977$  are obtained, so that the simple linear regression equation formed is  $\hat{Y}=2.897+10.111X_2$ . It was concluded that because  $H_0$  is rejected and  $H_a$  is accepted, it can be said that there is a significant influence from the principal's management on teacher creativity. For a simple linear coefficient test based on the above Coefficient table,  $t_{\text{count}} > t_{\text{table}}$  or  $9.737 > 1.65$  is obtained, which means that there is an influence of the principal's leadership on teacher creativity. Furthermore, the correlation coefficient is obtained by observing the Summary Model table below.

| Table 7<br>DESCRIPTION SUMMARY MODEL <sup>b</sup> |   |          |                   |                   |          |     |     |               |
|---------------------------------------------------|---|----------|-------------------|-------------------|----------|-----|-----|---------------|
| Model                                             | R | R Square | Adjusted R Square | Change Statistics |          |     |     |               |
|                                                   |   |          |                   | R Square Change   | F Change | df1 | df2 | Sig. F Change |

|                                                                   |   |                   |      |      |      |         |   |     |      |
|-------------------------------------------------------------------|---|-------------------|------|------|------|---------|---|-----|------|
| dimension0                                                        | 1 | .767 <sup>a</sup> | .589 | .585 | .589 | 154.717 | 1 | 138 | .000 |
| a. Predictors: (Constant), Principal Leadership (X <sub>1</sub> ) |   |                   |      |      |      |         |   |     |      |
| b. Dependent Variable: Teacher Creativity (Y)                     |   |                   |      |      |      |         |   |     |      |

The conclusion of the analysis of the Table 7 shows that there is a correlation coefficient of  $R=0.767$  and a determination coefficient of 0.589 or 58.9%. So that it can be concluded that 58.9% of teacher creativity can be influenced by the management of the principal while the remaining 41.1% influence by other factors. Testing the hypothesis of the influence of principals' leadership and management of principals together on teacher creativity using simple regression analysis obtained multiple regression equation values with the help of SPSS 20.0 for windows. As described in the form of the following coefficient table below.

| Table 8<br>COEFFICIENTS <sup>a</sup>          |                                        |                             |            |                           |       |      |
|-----------------------------------------------|----------------------------------------|-----------------------------|------------|---------------------------|-------|------|
| Model                                         |                                        | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|                                               |                                        | B                           | Std. Error | Beta                      |       |      |
| 1                                             | (Constant)                             | .548                        | 12.616     |                           | .043  | .965 |
|                                               | Principal Leadership (X <sub>1</sub> ) | .091                        | .199       | .058                      | .460  | .647 |
|                                               | Principal Management (X <sub>2</sub> ) | .912                        | .162       | .716                      | 5.646 | .000 |
| a. Dependent Variable: Teacher Creativity (Y) |                                        |                             |            |                           |       |      |

From the analysis of the Table 8, a value of  $b_0=0.548$ ,  $b_1=0.091$  and  $b_2=0.912$  is obtained so that the regression model is obtained as follows:  $\hat{Y}=0.548+0.091X_1+0.912X_2$ . The model shows that: (a) every increase in one principal's leadership score will be followed by an increase in teacher creativity by 0.091, if other variables are considered constant, and (b) each increase in one principal's management score will be followed by an increase in teacher creativity of 0.912, if other variables are considered permanent. Then the regression equations and regression coefficients are tested for significance, with reference to ANOVA as shown in Table 9.

| Table 9<br>ANOVA <sup>b</sup>                                                                             |            |                |     |             |        |                   |
|-----------------------------------------------------------------------------------------------------------|------------|----------------|-----|-------------|--------|-------------------|
| Model                                                                                                     |            | Sum of Squares | Df  | Mean Square | F      | Sig.              |
| 1                                                                                                         | Regression | 4275.180       | 2   | 2137.590    | 76.899 | .000 <sup>a</sup> |
|                                                                                                           | Residual   | 2974.311       | 137 | 27.797      |        |                   |
|                                                                                                           | Total      | 7249.491       | 139 |             |        |                   |
| a. Predictors: (Constant), Principal Management (X <sub>2</sub> ), Principal Leadership (X <sub>1</sub> ) |            |                |     |             |        |                   |
| b. Dependent Variable: Teacher Creativity (Y)                                                             |            |                |     |             |        |                   |

Based on the significance test above, obtained  $F_{\text{count}}=76.899$ . While the value of  $F_{\text{table}}$  with a significant level of  $\alpha=0.05$   $dk=110-2=108$ , then obtained the value of  $F_{\text{table}}=2.68$ . It turns out that  $F_{\text{count}}>F_{\text{table}}$  or  $76.899>2.68$ , then  $H_0$  is rejected and  $h_a$  is accepted meaning significant or there is influence of the principal's leadership and management of the principal towards teacher creativity. Furthermore, the correlation coefficient is obtained by observing the Summary Model table below.

| Table 10<br>DESCRIPTION SUMMARY MODEL <sup>b</sup>                              |   |                   |          |                   |                   |          |     |     |               |
|---------------------------------------------------------------------------------|---|-------------------|----------|-------------------|-------------------|----------|-----|-----|---------------|
| Model                                                                           |   | R                 | R Square | Adjusted R Square | Change Statistics |          |     |     |               |
|                                                                                 |   |                   |          |                   | R Square Change   | F Change | df1 | df2 | Sig. F Change |
| dimension0                                                                      | 1 | .768 <sup>a</sup> | .590     | .582              | .590              | 76.899   | 2   | 137 | .000          |
| a. Predictors: (Constant), Principal Management (X2), Principal Leadership (X1) |   |                   |          |                   |                   |          |     |     |               |
| b. Dependent Variable: Teacher Creativity (Y)                                   |   |                   |          |                   |                   |          |     |     |               |

Based on the Table 10, the correlation coefficient is  $R=0.768$  and the determination coefficients are 0.590 or 59%. It can be concluded that 59% of teacher creativity is influenced by the leadership and management of the principal while the remaining 40.1% is influenced by other factors. The following is displayed in the form of an image.

## DISCUSSION

From the research it can be proven that the principal leadership ( $X_1$ ) has a strong influence on teacher creativity. The magnitude of the effect can be expressed by the magnitude of the determination coefficient of 46.7%. The magnitude of the influence of the principal's leadership on teacher creativity is seen in column R of 0.684, which means that the influence of the principal's leadership on the creativity of teachers is classified as strong, this is evidenced by consulting the  $R$  value with the  $r$  value coefficient table. In addition, the regression line equation shows  $\hat{Y}=9.559+1.072X_1$ , meaning that the leadership of the principal can be estimated if the teacher's creativity score is known, namely that each increase in the principals leadership variable ( $X_1$ ) will be followed by an increase in the teacher creativity variable ( $Y$ ) of 9.559. This finding is in line with research (Sukendar, 2013) that principals leadership skills have a positive and significant effect on teacher performance with a correlation coefficient of 0.499 with a contribution of 0.240 or 24%. Furthermore, research (Setiyati, 2014) found a significant positive influence between principals leadership, work motivation and school culture together on teacher performance.

Data analysis shows that the principal's management ( $X_2$ ) influences teacher creativity. The magnitude of the effect can be expressed by the magnitude of the determination coefficient of 58.9%. Seen in column R amounting to 0.767, it means that the influence of the principals management on the creativity of the teacher is classified as strong, this is evidenced by consulting the  $R$  value with the coefficient table  $r$  value. In addition, the regression line equation influence between principal management on teacher creativity shows  $\hat{Y}=2.897+0.997X_2$ , meaning that the leadership of the principal can be estimated if the teacher's creativity score is known, namely that each increase in the principal's leadership variable ( $X_1$ ) will be followed by the increase in teacher creativity variable ( $Y$ ) was 2.897. This finding is in line with research (Sun & Xia, 2018) that principals' management has a significant and positive direct and indirect effect on teacher job satisfaction and the success of a teacher. Then the research (Salim, 2017) found a significant and positive influence between the principal's managerial abilities on school management effectiveness by 60.6% and the rest influenced by other variables. Significant influence between the leadership of the principal and management of the principal together with the creativity of the teacher is obtained from  $F_{\text{count}} > F_{\text{table}}$  or  $76.899 > 2.68$ . The magnitude of the influence of the principal leadership and the management of the principal on teacher creativity is seen in column R of 0.768 and is concentrated with the coefficient table of  $r$  values. It can be

concluded that the classification of the influence of principal management on teacher creativity is classified as strong. The findings of this study are in line with the results of the study (Bahri, 2010) that there is a positive and significant influence of principals' leadership and teacher professionalism on increasing creativity, teachers. Then research (Zuliawati, 2016) found that there was also an influence between creativity and teacher productivity.

## CONCLUSIONS

There is the influence of the principal's leadership on teacher creativity. This can be seen from  $t_{\text{count}} > t_{\text{table}} = 9.737 > 1.65$ , then  $H_0$  is rejected and accept  $H_a$  means significant means that there is influence of the principals leadership on teacher creativity. While the magnitude of the influence can be seen from  $R_{\text{square}} = 0.467$  which means that 46.7% of the creativity of the teacher is influenced by the leadership factor of the principal, while the remaining 53.3% is influenced by other factors. In addition, the magnitude of the influence of the principal's leadership on teacher creativity is seen in column R of 0.684 and consulted with the coefficient table of r values concluded as relatively strong. And the regression equation is  $\hat{Y} = 9.559 + 1.072X_1$ , which means that the principal's leadership can be estimated if the teacher's creativity score is known, namely that each increase in the principals leadership variable ( $X_1$ ) in one unit will be followed by an increase in the teacher creativity variable (Y) of 9.559. There is the influence of the principal's management on teacher creativity. This can be seen from  $t_{\text{count}} > t_{\text{table}} = 12.439 > 1.65$ , then  $H_0$  is rejected and accept  $H_a$  means significant, which means that there is the influence of principal management on teacher creativity. While the magnitude of the influence can be seen from  $R_{\text{square}} = 0.589$  which means 58.9% of teacher creativity is influenced by the principal management factor, and 41.1% is influenced by other factors. In addition, the magnitude of the influence of the principals management on teacher creativity is seen in column R of 0.767 and consulted with the coefficient table of r values concluded as relatively is strong. And the regression equation is:  $\hat{Y} = 2.897 + 0.997X_2$ , which means that the principals leadership can be estimated if the teacher's creativity score is known, namely that each increase in the principals leadership variable ( $X_1$ ) in one unit will be followed by an increase in the teacher's creativity variable (Y) of 2.897.

There is a joint influence between the principals leadership and the principals management of teacher creativity. This can be seen in the obtained  $F_{\text{count}} > F_{\text{table}}$  which is  $76.899 > 2.68$ , and the amount of contribution (influence) from  $R_{\text{square}} = 0.590$ , which means that 59% of teacher creativity is influenced jointly by the leadership factor of the principal and the principal management, while the remaining 41% is influenced by other factors. The influence of the principal's leadership and the principal's management on teacher creativity is seen in column R of 0.768 and consulted with the coefficient table of r values. It can be concluded that the influence of the principals management on teacher creativity is strong. The equation of the regression line influence between the leadership of the principal and the management of the principal on teacher creativity shows  $\hat{Y} = 0.548 + 0.091X_1 + 0.912X_2$ , which means that the leadership of the principal can be estimated if the teacher's creativity score is known that each increase in principal leadership variable ( $X_1$ ) and management of the principal ( $X_2$ ) in one unit will be followed by an increase in the teacher creativity variable (Y) of 0.548.



## **Implications for practice**

The results of the analysis of the findings of this study have implications for three important things. First, the leadership of a school principal greatly determines the progress of a school. Therefore we need a system of selection and competency testing of principals in a transparent, competitive and professional manner. The process of placing the principal is not only considering the aspects of seniority and rank, but on mastering the main tasks and functions as an educational leader. Elements of the Regional Government and the Office of Education need to design a school head selection instrument that truly answers the needs of prospective school principals in order to support the realization of education quality. Secondly, educational institutions providing prospective teachers need to ripen their students with management theory and leadership so that they can be prepared as future leaders. Maturity in mastering management theories and concepts and leadership requires practice and training that are integrated and sustainable. The content of the learning curriculum requires weighting on the theory and implementation of management and organizational leadership. This is in line with the view (Yogaswara, 2010), that the success of education through the implementation of management in schools requires a headmaster who has high managerial and professional integrity and democratic abilities in the decision making process.

Further research is needed to determine whether the results of this study can apply generally to schools in other provinces. Likewise, in schools with state and private status, the results are different. Third, teacher creativity is very dependent on the individual each teacher connects theory and practice through a series of activities and treatments that are tailored to the level of development of students. The principal needs to facilitate enrichment programs and increase teacher creativity on an ongoing basis. Teachers need to be accompanied, directed, supervised and valued in every learning process in the classroom. Even professional teachers need policy support from the school management. Teacher quality is related to many things, including principals' leadership, organizational culture, and work motivation of the teacher concerned (Manik & Bustomi, 2011).

## **LIMITATION**

This study has limitations because in assessing the influence of leadership and management the principal only involved 140 teachers and had a limited population area because it was only able to reach five schools in Ambon city. The small number of samples certainly cannot be said to represent the population of teachers and principals. Sometimes also because of busy and limited time, respondents do not necessarily provide answers according to the actual conditions that occur in each school. In addition, in terms of increasing teacher creativity, it is not only influenced by the leadership and management of the principal, but there are also other factors that need to be explored and revealed through further research in the future. There are still external factors of the school even the personality of each teacher can have an impact on teacher creativity. At least this research opens up new insights about the factors that internally influence the creativity of a teacher in school.

## Future Research

This research will of course be the basis for future researchers to find other factors that influence teacher creativity in addition to the leadership and management of the principal. Future research can be focused on other aspects that have not been revealed in the analysis of the findings of this study. Teacher creativity is indeed related to many aspects including school climate and culture, peer support, low mastery of learning methods and strategies, and others that require further research. The results showed that there was an influence of the principal's leadership on teacher creativity by 46.7%. These results indicate that there is still 53.3% remaining which has not been revealed as a certain variable which also influences the creativity of the teacher. Furthermore, the influence of the principal's management on teacher creativity was 41.1%. These results indicate that there is still 58.9% remaining which has not been revealed as a certain variable which also influences the creativity of the teacher. Then the last, the influence of the leadership of the principal and management of the principal together on teacher creativity is 59%. This result also shows that there is still 41% remaining which has not been revealed as a certain variable which also influences the creativity of the teacher.

In further research, several aspects that need to be considered include; competence, role, style, organizational culture, school climate, support of students and parents and peers can be explored as variables that contribute to increasing teacher creativity. Or conversely it is considered as the cause of the teacher's low creativity so far. These aspects will then complement this research so that it becomes a finding that helps each school principal, teacher, and student to improve the quality of learning at all times.

## REFERENCES

- Amtu, O. (2011). *Management of education in the era of regional autonomy, concepts, strategies and implications*. Bandung: Alfabeta.
- Amtu, O. (2015). *School principal performance evaluation*. Bandung: Alfabeta.
- Amtu, O. (2016). *Human resource management in education*. Bandung: Alfabeta.
- Baharun, H. (2018). Increasing teacher competence through the madrasah head leadership system. *At-Tajdid: Tarbiyah Science Journal*, 6(1), 1-26.
- Bahri, S. (2010). The role of principal leadership and school climate on teacher performance. *Visipena Journal*, 1(2).
- Benedek, M., Nordtvedt, N., Jauk, E., Koschmieder, C., Pretsch, J., Krammer, G., & Neubauer, A.C. (2016). Assessment of creativity evaluation skills: A psychometric investigation in prospective teachers. *Thinking Skills and Creativity*, 21, 75-84.
- Berezski, E.O., & Kárpáti, A. (2018). Teachers' beliefs about creativity and its nurture: A systematic review of the recent research literature. *Educational Research Review*, 23, 25-56.
- Brahmasari, I.A., & Suprayetno, A. (2009). Effect of work motivation, leadership and organizational culture on employee job satisfaction and its impact on company performance (Case study at PT. Pei Hai International Wiratama Indonesia). *Management and Entrepreneurship Journal*, 10(2), 124-135.
- Brahmasari, I.A. (2009). The influence of work motivation, leadership and organizational culture on employee job satisfaction and its impact on company performance (Case study at PT. Pei Hai International Wiratama Indonesia). *Journal of Management and Entrepreneurship*, 10(2).
- Brown, M. (1964). The headmaster as administrator of the school community. *Journal of Educational Administration*, 2(1), 2-8.
- Castillo-Vergara, M., Galleguillos, N.B., Cuello, L.J., Alvarez-Marin, A., & Acuña-Opazo, C. (2018). Does socioeconomic status influence student creativity? *Thinking Skills and Creativity*, 29, 142-152.

- Cetin, M.O., & Kinik, F.S.F. (2015). An analysis of academic leadership behavior from the perspective of transformational leadership. *Procedia-Social and Behavioral Sciences*, 207, 519-527.
- Chan, S., & Yuen, M. (2014). Creativity beliefs, creative personality and creativity-fostering practices of gifted education teachers and regular class teachers in Hong Kong. *Thinking Skills and Creativity*, 14, 109-118.
- Crețu, D. (2015). Identification of leadership styles in the pre-university educational system: Case study. *Procedia-Social and Behavioral Sciences*, 186, 535-543.
- Cummings, G.G., Tate, K., Lee, S., Wong, C.A., Paananen, T., Micaroni, S.P.M., & Chatterjee, G.E. (2018). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies*, 85, 19-60.
- Danim, S. (2008). *New vision of school management from the bureaucracy unit to academic institutions*. Jakarta: Bumi Aksara.
- Darmody, M., & Smyth, E. (2016). Primary school principals job satisfaction and occupational stress. *International Journal of Educational Management*, 30(1), 115-128.
- Davies, D., Jindal-Snape, D., Digby, R., Howe, A., Collier, C., & Hay, P. (2014). The roles and development needs of teachers to promote creativity: A systematic review of literature. *Teaching and Teacher Education*, 41, 34-41.
- Demir, S., & Şahin, F. (2014). Assessment of prospective science teachers' metacognition and creativity perceptions and scientific toys in terms of scientific creativity. *Procedia-Social and Behavioral Sciences*, 152, 686-691.
- Desianty, S. (2005). Effect of leadership style on organizational commitment at PT Pos Indonesia (Persero) Semarang. *Journal of Management and Organizational Studies* 2(1), 69-84.
- Ekosiswoyo, R. (2007). Effective principal leadership is key to achieving educational quality. *Journal of Educational Sciences, State University of Malang*, 14(2), 76-82.
- Fauziah, Y.N. (2011). Teacher's capability analysis in developing creative v-grade students in thinking skills in natural science learning. *Special Edition Journal*, 1(1), 98-106.
- Fitrah, M. (2017). The role of principals in improving education quality. *Journal of Quality Assurance*, 3(1), 31-42.
- Gusman, H.E. (2014). Relationship between principal leadership style and teacher performance in SMP N sub-district Palembang Agam District. *Education Management Bahana Journal*, 2(1), 293-301.
- Handoyo, S. (2011). Measurement of servant leadership as an alternative leadership in higher education Institutions in the period of organizational change. *Hubs-Asia*, 9(2), 131.
- Hermawan, A. (2009). *Business research: The quantitative paradigm*. Jakarta: Grasindo
- Hone, B.W. (1969). Research into education: A headmaster's view. *Journal of Educational Administration*, 7(1), 66-77.
- Husain, S. (2011). Teacher creativity in designing the environment as a learning resource in productive subjects in Gorontalo City Vocational School. *Journal of Research and Education*, 8(1), 49.
- Iriyani, D. (2008). Development of clinical supervision to improve basic teacher teaching skills. *Didaktika Journal*, 2(2), 285-285.
- Iskandar, U. (2013). Principal leadership in improving teacher performance. *Journal of Vision Science Education*, 10(1).
- Jones, V., & Brazdau, O. (2015). Conscious leadership, a reciprocal connected practice: A qualitative study on postsecondary education. *Procedia-Social and Behavioral Sciences*, 203, 251-256.
- Jonsdottir, S.R. (2017). Narratives of creativity: How eight teachers on four school levels integrate creativity into teaching and learning. *Thinking Skills and Creativity*, 24, 127-139.
- Karweti, E. (2010). Effect of principal's managerial ability and factors affecting work motivation on SLB teacher performance in Subang Regency. *Journal of Educational Research*, 11(2), 77-89.
- Kempa, R. (2015). *Principal leadership*. Yogyakarta: Waves.
- Lapeniene, D., & Dumciene, A. (2014). Teachers' creativity: Different approaches and similar results. *Procedia-Social and Behavioral Sciences*, 116, 279-284.
- Li, L., Hallinger, P., & Ko, J. (2016). Principal leadership and school capacity effects on teacher learning in Hong Kong. *International Journal of Educational Management*, 30(1), 76-100.
- Lukoschek, C.S., Gerlach, G., Stock, R.M., & Xin, K. (2018). Leading to sustainable organizational unit performance: Antecedents and outcomes of executives' dual innovation leadership. *Journal of Business Research*, 91, 266-276.
- Manik, E., & Bustomi, K. (2011). Effect of principal leadership, organizational culture and work motivation on teacher performance at Rancaekek 3 Public Middle School. *Journal of Economics, Business & Entrepreneurship*, 5(2), 97-107.

- Matsum, J.H., & Ulfah, M. (2013). Analysis of teacher creativity in teaching and learning in Class XI High School economics subjects. *Journal of Education and Learning*, 6(1).
- Mullet, D.R., Willerson, A.N. Lamb, K., & Kettler, T. (2016). Examining teacher perceptions of creativity: A systematic review of the literature. *Thinking Skills and Creativity*, 21, 9-30.
- Ngang, T.K. (2012). A comparative study on teacher leadership in special education classroom between China and Malaysia. *Procedia-Social and Behavioral Sciences*, 31, 231-235.
- Oktavia, Y. (2014). School principals' efforts to improve teacher creativity in learning in elementary schools. *Education Management Bahana Journal*, 2(1), 808-815.
- Randel, A.E., Galvin, B.M., Shore, L.M., Ehrhart, K.H., Chung, B.G., Dean, M.A., & Kedharnath, U. (2018). Inclusive leadership: Realizing positive outcomes through belongingness and being valued for uniqueness. *Human Resource Management Review*, 28(2), 190-203.
- Ratumanan, T.G., & Laurens, T. (2011). *Learning outcomes assessment at the education unit level*, (2<sup>nd</sup> Edition). East Indonesia Education Development Assessment Foundation and UNESA, Surabaya.
- Riggio, R.E. (2016). Leadership. In H. S. Friedman (Ed.), *Encyclopedia of Mental Health (Second Edition)* (pp.1-4). Oxford: Academic Press.
- Romero-Iribas, A.M., & Martínez-Priego, C. (2011). Developing leadership through education for friendship. *Procedia-Social and Behavioral Sciences*, 15, 2248-2252.
- Rosyadi, Y.I., & Pardjono, P. (2015). The role of principals as managers in improving the quality of education at SMP 1 Cilawu Garut. *Journal of Educational Management Accountability*, 3(1), 124-133.
- Rubenstein, L.D., Ridgley, L.M., Callan, G.L., Karami, S., & Ehlinger, J. (2018). How teachers perceive factors that influence creativity development: Applying a social cognitive theory perspective. *Teaching and Teacher Education*, 70, 100-110.
- Sagala, S. (2013). *Professional capabilities of teachers and education personnel*. Bandung: Alfabeta.
- Salim, N.A. (2017). Increasing school management effectiveness through strengthening principal's managerial capabilities. *Education Management and Supervision Journal*, 2(1).
- Sallis, E. (2006). *Total quality management in education*. Yogyakarta: Ircisod.
- Setiyati, S. (2014). Effect of principal leadership, work motivation, and school culture on teacher performance. *Journal of Technology and Vocational Education*, 22(2), 200-206.
- Soh, K. (2017). Fostering student creativity through teacher behaviors. *Thinking Skills and Creativity*, 23, 58-66.
- Sugiyono. (2008). *Quantitative, qualitative research and R&D methods*. Bandung: Alfabeta.
- Sukendar, N.C.E. (2013). The influence of principal leadership skills and motivation of teacher work on teachers' performance in state middle schools in Sub Rayon 03 Jepara District. *Journal of Educational Management at the University of PGRI Semarang*, 2(1).
- Sulistiya, M. (2013). Effect of principal leadership on teacher performance. *Economics Veterans IKIP Semarang*, 1(2).
- Sun, A., & Xia, J. (2018). Teacher-distributed leadership, teacher self-efficacy and job satisfaction: A multilevel SEM approach using the 2013 TALIS data. *International Journal of Educational Research*.
- Suryana, F. (2012). *Guru profesional*. Bandung: Refika Aditama.
- Timpe, A. D. (1992). *Creativity*. Jakarta: Elex Media Komputindo.
- Triyanto, E., Anitah, S., & Suryani, N. (2013). The role of principal leadership in utilizing learning media as an effort to improve the quality of learning processes. *Education Technology*, 1(2), 226-238.
- Utami, S., Wenitra. (2014). Teacher's perception of principal's managerial skills in the state junior high school of Koto Tangah District, Padang City. *Journal of Educational Administration*, 2(1), 765.
- Wahjosumidjo. (2001). *Principal leadership, theoretical reviews and problems*. Jakarta Raja Grafindo Persada.
- Wang, L., & Kokotsaki, D. (2018). Primary school teachers' conceptions of creativity in teaching english as a foreign language (EFL) in China. *Thinking Skills and Creativity*, 29, 115-130.
- Yanto, H., Yulianto, A., Br Sebayang, L.K., Mulyaga, F. (2017). Improving the compliance with accounting standards without public accountability (SAK ETAP) by developing organizational culture: A case of Indonesian SMEs. *The Journal of Applied Business Research*, 33(5), 929-940.
- Yogaswara, A., Nanang Sa'ud, F., Saefudin, U. (2010). Principal Managerial Contributions And Staffing Information Systems To Teachers' Teachers' Performance. *Journal of Educational Research*, 11(2), 60-72.
- Yuliana, L. (2007). *The role of principals in developing creative culture teachers of physical education subjects*. Yogyakarta State University.
- Zhang, Q., Siribanpitak, P., & Charoenkul, N. (2018). Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China. *Kasetsart Journal of Social Sciences*.



- Zivitere, M., Riashchenko, V., & Markina, I. (2015). Teacher–Pedagogical creativity and developer promoter. *Procedia - Social and Behavioral Sciences*, 174, 4068-4073.
- Zuliawati, N. (2016). Effect of creativity and work motivation on the productivity of Islamic religious education teachers of elementary schools in Baturetno District, Wonogiri Regency. *At-Tarbawi: Journal of Islamic Education Studies*, 1(1), 23-38.