



## The Influence of Principal Managerial Competence on Teacher Performance at Schools in Bandar Lampung

Lourena Fitri May\*, Abdurrahman, Hasan Hariri, Sowiyah, Bujang Rahman  
Faculty of Teacher Training and Education, Universitas Lampung, Indonesia

### Article History:

Received: December 6<sup>th</sup>, 2020  
Revised: May 7<sup>th</sup>, 2020  
Accepted: June 4<sup>th</sup>, 2020  
Published: June 29<sup>th</sup>, 2020

### Keywords:

Principal managerial competence,  
Teacher performance,  
Vocational high school

### \*Correspondence Address:

lourenafitrimay31@gmail.com

**Abstract:** Any improvement effort made without the support of quality teacher performance will not possibly work well to help enhance high-quality education. High teacher performance is influenced by many factors. Theoretically, one important factor is principal managerial competency. However, how this factor influences teacher performance is under-researched, particularly in Bandar Lampung schools. This study aimed at investigating the influence of principal managerial competence on teacher performance in public vocational high schools in Bandar Lampung. This study used a quantitative research design, using a questionnaire of which its validity and reliability were ensured before data collection. The sample of the research were 88 teachers from nine vocational high schools in Bandar Lampung City, Lampung Province, Indonesia. The data collected were analyzed using descriptive statistics and simple regression, with the help of SPSS version 24. Results showed that principal managerial competence positively and significantly influenced teacher performance in public vocational high schools in Bandar Lampung. This study recommends the whole stakeholders to pay more attention and to evaluate the principals' performance.

## INTRODUCTION

The field of education in Indonesia has not yet succeeded (Rustiani, 2019), in 2018 out of 10 countries, Indonesia ranked the fifth, with only 44 % of the population completing secondary education, while 11 % of students fail to complete education. To be number one in ASEAN there need to be efforts from the government. In case of the relationship of school leadership between principals and teachers, including in improving student behavior has been a concern in the world of education (Grissom et al., 2015; Grissom & Loeb, 2009; Marks & Printy, 2003; Wind et al., 2019).

Providing students with marketable vocational training skills is one essential

objective of the vocational schools (Asih & Ellianawati, 2019; Tansel, 1999) to ensure that the graduates are capable of keeping pace with science and technology development. Because of this, education should be able to contribute optimally to providing the next generation with not only high-quality entrepreneurship skills in the fields of science and technology but also in piety, as mandated by the 1945 Law (PH, 2013).

Low quality of human resources in Indonesia results in low-quality education, ultimately impeding national economic development. Arrangement of human resources needs to be pursued gradually and continuously through a quality education system, both in formal,

informal, and non-formal education channels, ranging from basic education to higher education (Mulyasa E, 2007).

To realize the educational goals mandated by the National Education System Law, vocational and technical high schools have an important role in creating professional human resources. This is supported by Kreisman & Stange (2020) and Hambali (2019) who state that vocational and technical high school graduates are prepared for the workforce. Vocational high school as one level of education is inseparable from problems regarding input, process, and output. Therefore, if the input is good but the teaching and learning process is not good, then achieving an output will not be optimal and graduates find it difficult to get a job. In this case, a teacher role matters (Hambali, 2019; Kreisman & Stange, 2020).

The teacher is a component that is very influential in the creation of quality educational processes and outcomes. Evaluation can be done to improve teacher performance in schools (Taylor & Tyler, 2012). Suharsaputra (2010) and Hartiwi et al. (2020) agreed that performance can be assessed from the aspect of basic abilities that must be possessed by a teacher, teacher quality is identical to teacher performance.

In Indonesia, teacher competency test (known as UKG) is used to assess teacher performance. UKG is an exam held to measure the professional and pedagogical competencies of teacher's content domains (Retnaningsih et al., 2019). UKG is intended to find out the teacher mastery map on pedagogical and professional competencies. The purpose of the UKG is as an entry point for evaluating teacher performance and as a control tool for implementing teacher performance appraisal. In 2015 UKG online was conducted and teachers obtained a professional certificate. The national UKG average was 53.05, below an average grade of 55 targetted by the

Government. In detail, at the national level, the average professional score was 54.77, the average score of pedagogical competence was 48.94. Whereas in Lampung Province, the average score of UKG is 49.75 below 50 which is below the national score average and targetted score (Rahman et al., 2015).

The low performance of teachers will influence the implementation of tasks leading to affecting the achievement of educational goals. In these conditions, the principal plays an important role, because he/she can provide a climate that allows teachers to work with enthusiasm. With managerial competence possessed, the principal builds and maintains positive teacher performance.

One appropriate leadership model that principals can apply is transformational leadership, where transformational principals can identify visions. The principal's education level is also positively correlated with each leadership factor (Valentine & Prater, 2011). Recruitment of many principals that are not based on competency abilities but political factors, which are also in line with the performance of teachers in Indonesia shows the very low performance of their duties. In carrying out managerial performance, principals are required to perform three types of skills. For more details, Karweti (2010) states that in the framework of carrying out its managerial tasks, at least three types of skills are needed. The skills are: technical, human, and conceptual. With technical skills, principals are capable of using procedures, technical, and knowledge of specific fields. With human skills, principals are capable of collaborating, understanding, and motivating, others individually and collectively. With conceptual skills, principals are capable of coordinating and integrating all organizational interests and activities. The performance of managerial skills varies according to the level of managerial position in the organization.

Alfionita et al. (2019) emphasized that school principals are one of the most important education components in improving teacher quality.

Implementation of principal principal managerial tasks in education units as an organizational system is intended to achieve goals. The aim is to be able to improve the quality of education in the education unit the principals lead and to be able to obtain good results in a series of educational and learning activities that are highly dependent on the figure of the teacher in the school (Dee & Wyckoff, 2015; Tangkilisan, 2005; Yogaswara et al., 2010). This is consistent with the research results of Darling-Hammond (2010), that improving education can be through teacher performance appraisal for licensing and certification that can also predict teacher success.

Demands for the development of the principal's managerial skills are needed, in connection with the limitations that exist in themselves as human beings. This self-recognition is needed, considering that humans are not all-round creatures. According to Mulyasa E (2007), not all school principals have sufficient insight to carry out their duties and functions in improving the quality of education in schools. Huda et al. (2020) argues that the teacher is assigned as a facilitator who has a role to learn optimally by using various strategies, methods, media, and learning resources through school education institutions, both established by the government or by the public or private sector.

Teacher performance cannot be separated from the education management paradigm which gives authority to the Principal inside to do the planning, organizing, monitoring, and controlling of education in schools (Heneman et al., 2006; Medley & Coker, 1987). This is a reference for researchers to examine the effect of the principal's managerial competence on the performance of

teachers in Bandar Lampung, especially in vocational high schools, because there is still no similar research for teachers in vocational high schools in Lampung.

## **METHOD**

This study employed the quantitative approach with 715 teachers as the population. the data was collected using a questionnaire to 88 randomly selected sample teachers from nine vocational high schools in Bandar Lampung City, Lampung Province, Indonesia in the academic year of 2018-2019. A five-point Likert rating scale is used ranging from very satisfied to very dissatisfied.

This study used one independent variable (principal managerial competence) consisted of 21 items and one dependent variable (teacher performance) consisted of 22 items.

In terms of procedure, this study began by preparing the instrument for the independent variable and dependent variable. Before it was used in real research, the instrument was tested for its validity and reliability. The trial was addressed to 30 teachers as respondents in 9 schools. The test of validity was based on the product-moment correlation. After validity and reliability were conducted and confirmed, the valid and reliable instrument was addressed to the sample of 88 teachers.

The data obtained were analyzed using descriptive quantitatively using simple regression to determine the effect of principal managerial competence on teacher performance with the help of SPSS version 24. Before the regression was used to analyze the data, such assumptions as normality, linearity, homoscedasticity, and independence were tested and confirmed (Hilton, P. R., & Brownlow, 2004).

## RESULT AND DISCUSSION

The description of the variables (teacher performance and principal managerial competence) is shown in Table 1.

**Table 1.** Descriptive Statistics of Variables

Variable	Teacher Performance	Principal Managerial Competence
Min	51	53
Max	104	103
Sum	7060	6488
Mean	80.23	73.73
SD	10.502	10.852
Variance	110.293	117.764

Table 1 shows a description of the research variables. In general, the average value of the teacher performance variable (M = 80.23, SD = 10.502) is higher than the average value of the principal managerial competence variable (M = 73.73, SD = 10.852).

**Table 2.** The Principal Managerial Competence Data Description

Interval Class	Frequency	Percentage
51-57	1	1.13%
58-64	6	6.81%
65-71	10	11.36%

**Table 4.** Validity and Reliability of Variable X

Variable X	Items	Sig.	Standard Sig.	Remarks	Cronbach Alpha Coeff.	Remarks
Principal Managerial Competence	Item1	.003	0.05	Valid	0.888	Reliable
	Item2	.000		Valid		
	Item3	.001		Valid		
	Item4	.000		Valid		
	Item5	.000		Valid		
	Item6	.003		Valid		
	Item7	.000		Valid		
	Item8	.128		Not valid		
	Item9	.000		Valid		
	Item10	.001		Valid		
	Item11	.000		Valid		
	Item12	.000		Valid		
	Item13	.002		Valid		
	Item14	.004		Valid		
	Item15	.004		Valid		
	Item16	.004		Valid		
	Item17	.002		Valid		
	Item18	.001		Valid		
	Item19	.307		Not Valid		
	Item20	.002		Valid		
	Item21	.005		Valid		

Interval Class	Frequency	Percentage
72-78	17	19.31%
79-85	28	31.81%
86-92	16	18.18%
93-99	4	4.54%
100-104	6	6.81%

Based on Table 2 it can be seen that as many as 28 respondents (31.81 %) are in the average group, while as many as 34 respondents (38.61 %) are below the average and 26 respondents (29.53%) are above the group average.

**Table 3.** Description of Teacher Performance

Interval Class	Frequency	Percentage
53-59	5	5.68 %
60-66	24	27.27 %
67-73	22	25 %
74-80	12	13.63 %
81-87	14	15.90 %
88-94	8	9.09 %
95-101	2	2.27 %
102-103	1	1.13 %

Based on Table 3, it can be seen that 24 respondents (27.27 %) are in the average group while 5 respondents (5.68 %) are below the average and 59 respondents (67.02 %) are above the group average.

**Table 5.** Validity and Reliability of Variable Y

Variable Y	Items	Sig.	Standard Sig.	Remarks	Cronbach Alpha Coeff.	Remarks
Teacher Performance	Item1	.000	0.05	Valid	0.919	Reliable
	Item2	.000		Valid		
	Item3	.000		Valid		
	Item4	.403		Not valid		
	Item5	.000		Valid		
	Item6	.000		Valid		
	Item7	.000		Valid		
	Item8	.966		Not valid		
	Item9	.000		Valid		
	Item10	.000		Valid		
	Item11	.000		Valid		
	Item12	.001		Valid		
	Item13	.000		Valid		
	Item14	.318		Not valid		
	Item15	.000		Valid		
	Item16	.002		Valid		
	Item17	.001		Valid		
	Item18	.002		Valid		
	Item19	.763		Not valid		
	Item20	.001		Valid		
	Item21	.000		Valid		
	Item22	.000		Valid		

The validity of the instrument was examined. Valid instrument means that the statement could represent the topic. Based on the result of Tabel 4 and Tabel 5, it appears that on the 21 items of Principal Managerial Competence variable (X) there are 19 valid items and 2 items are not valid. These invalid items were disposed of and not used in real research. Reliability value for the 1 item for X variable categorized as very high. Therefore, 22 items of Teacher Performance (Y) there are 18 valid items and 4 invalid items. The invalid items were disposed of and not used in real research. The reliability value for the 18 items of the Y variable was categorized as very high. These results indicate that the item of Y instrument is reliable (Gliem & Gliem, 2003).

The normality of the data was examined using Kolmogorov-Smirnov at  $\alpha$  0.05. If the significance value is more than 0.05, the data is normal. Conversely, if the significance value  $>$  0.05, the data are not normally distributed. Based on the normality test is known. Sig. (2-tailed) of the teacher performance is 0.421 and Sig.

(2-tailed) of principal managerial competence is 0.559. Then following the basis for decision making in the Kolmogorov-Smirnov normality test above, it can be concluded that the data are normally distributed.

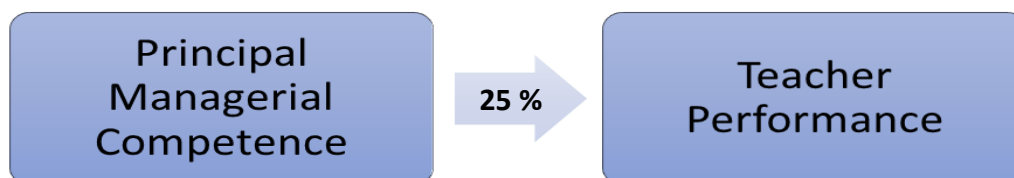
Linearity test is done to know that the two variables have a linear relationship or not, so they can find out whether there are regression analysis techniques to draw hypotheses. The linearity test was carried out with the help of SPSS for the independent and dependent variables. The significance value of deviation from linearity on the results of the principal's managerial competency test on teacher performance is 0.388. Because the significance value of Deviation from Linearity  $>$  0.05,  $H_0$  is accepted or it can be concluded that the regression model is linear.

The heteroscedasticity test in the study was carried using the Glejser test using SPSS software. Based on the significance value (sig) for the principal's managerial competency variable, the significance value (sig) is 0.762. Therefore the significance value is greater

than 0.05. It can be concluded that there are no heteroscedasticity symptoms in the regression model which means homogeneous data.

Regression analysis was conducted to determine the contribution of independent variables on the dependent variable. In this case, the variable X to Y. The value of the influence (R) that is equal to 0.158. From the output obtained

a coefficient of determination (R Square) of 0.25, which implies that the influence of the independent variable (Principal Managerial Competence) on the dependent variable (Teacher Performance) is 25 % while 75 % of teacher performance is influenced by other variables so that it can be described as shown in Figure 1.



**Figure 1.** Influence of Principal Managerial Competence on Teacher Performance

Based on the simple regression test Constant (a) is 54.984, while the value of the principal's managerial competence (b) is 0.185. Based on the significance value: from the Coefficients table obtained a significance value of  $0.009 < 0.05$ , it can be concluded that the managerial competency variable of the principal influences the teacher performance variable. Based on the value of t: the known value of  $t_{\text{arithmetic}} 3.670 > t_{\text{table}} 2.906$ , so it can be concluded that the principal managerial competence variable (X) influences the teacher performance variable (Y).

The influence of principal managerial competence on teacher performance was very high ( $r = 55.169$ ) and contributed to teacher performance by 25 %. This result indicates that the principal managerial competence influences teacher performance. Principal managerial competence is the ability of a school principal to manage the resources of the school organization to achieve predetermined school goals. The duties as well as managerial roles of school principals comprise school organization planning and development following needs.

Another key aspect related to the role of the principals is how they can

make efforts to enhance education quality and help teachers improve learning and teaching process quality (Glasman & Heck, 1990; Hartinah et al., 2020; Susanto & Hosnani, n.d.). To be optimal in empowering schools, principals need to recruit, select and place and orient new education personnel; utilize and maintain education personnel; assess the performance of teachers and education staff; develop a wage system that can guarantee certainty and fairness; implement and develop a career development system; motivate educators and education staff; foster harmonious working relationships. When the supervision of the teachers is certain with the level of compensation packages offered, teachers will be satisfied with their work, and thus they will improve their efforts in doing their work (Azis et al., 2019; Wenno, 2017).

Teachers play a role in improving the learning and teaching process; therefore, a teacher is required to have a variety of basic competencies in the learning and teaching process. Performance appraisal is also very important because there is a relationship with the assessment of one's work (Muhammad Arifin, 2015).

Performance is influenced by many factors, one of the important ones being managerial competence of principals in managing and leading their schools (Aman, 2019; Rahardjo, 2014). The principals are a driving factor for school resources, especially teachers and school employees. So great is the role of the principal in the process of meeting educational goals, and thus the success or failure of a school is largely determined by the quality of the principals, especially in their managerial competence to empower teachers and their employees to work more actively and professional (Fandiño, 2010; Wijaya & Lestarinigrum, 2019).

Managerial principals in public vocational high schools can apply satisfactory managerial leadership for teacher performance in public vocational high schools in Bandar Lampung. Bandar Lampung City is a city in Indonesia as well as the capital and largest city in Lampung Province. It is the center of the provincial and city government. Any educational transformation that improves education quality will quickly help adapt and adjust to the needs of schools. The central and provincial governments pay attention to education quality through the teacher competency test (abbreviated as UKG). UKG fulfills the needs of teachers to be improved following the chosen profession. Also, teacher certification is an important factor in determining whether teacher candidates are given permission and authority to teach. Although teacher certification is not examined in this study, it is thought to be one of the factors that affect the performance of teachers in vocational high schools in Bandar Lampung

## CONCLUSION

Factors that contribute to improving the performance of teachers are inseparable from the role of the principal as superior. In carrying out managerial tasks at least four types of skill areas,

namely technical, human, social, and conceptual that must be mastered by the principals. Principals with these skills can contribute to helping teachers improve their quality and performance. Poor teacher performance will influence the implementation of tasks which in turn will also affect the achievement of educational goals. The finding of this study indicates that principal managerial competence needs to maintain and gradually improve because it positively and significantly influences the performance of teachers of vocational high schools. This study recommends the whole stakeholders to pay more attention and to evaluate the principals' performance.

## REFERENCES

- Alfionita, I. L., Muhaimi, L., & Fahrudin, F. (2019). The Influence of School Head Managerial and Teacher's Performance Abilities in the Quality of PAUD at Cluster 3 District Gerung. *International Journal of Multicultural and Multireligious Understanding*, 6(5), 849. <https://doi.org/10.18415/ijmmu.v6i5.1155>
- Aman. (2019). History teachers' competence in implementing authentic assessment: A case study in a state senior high school in Yogyakarta. *International Journal of Learning, Teaching and Educational Research*, 18(10), 68–89. <https://doi.org/10.26803/ijlter.18.10.5>
- Asih, N. F., & Ellianawati, E. (2019). The Enhancement of Verbal Communication Skills for Vocational Students through Project-Based Learning Physics. *Jurnal Penelitian & Pengembangan Pendidikan Fisika*, 5(1), 21–28. <https://doi.org/10.21009/1.05103>
- Azis, M., Bakri, A., & Manda, D. (2019). The Influence of Educational Qualifications, Work Periods, and

- School Climate on the Performance of Economic Teachers in Vocational Schools in Makassar City. *Jurnal Ilmiah Ilmu Administrasi Publik*, 9(1), 57. <https://doi.org/10.26858/jiap.v9i1.9318>
- Darling-Hammond, L. (2010). Evaluating Teacher Effectiveness: How Teacher Performance Assessments Can Measure and Improve Teaching. In *Center for American Progress* (Issue October).
- Dee, T. S., & Wyckoff, J. (2015). Incentives, Selection, and Teacher Performance: Evidence from Impact. *Journal of Policy Analysis and Management*, 34(2), 267–297. <https://doi.org/10.1002/pam.21818>
- Fandiño, Y. J. (2010). Research as a means of empowering teachers in the 21st century. *Educ. Educ*, 13(1), 109–124.
- Glasman, N. S., & Heck, R. H. (1990). The Changing Leadership Role of the Principal: Implications for Principal Assessment. *Peabody Journal of Education*, 68(1), 5–24. <https://doi.org/10.1080/01619569209538708>
- Gliem, J. A., & Gliem, R. R. (2003). Calculating, Interpreting, and Reporting Cronbach's Alpha Reliability Coefficient for Likert-Type Scales. *Midwest Research to Practice Conference in Adult, Continuing, and Community Education*, 14. <https://doi.org/10.1016/B978-0-444-88933-1.50023-4>
- Grissom, J., & Loeb, S. (2009). *Triangulating Principal Effectiveness: How Perspectives of Parents, Teachers, and Assistant Principals Identify the Central Importance of Managerial Skills* (Issue december). CALDER, The Urban Institut.
- Grissom, J., Loeb, S., & Mitani, H. (2015). Principal time management skills: explaining patterns in principals' time use, job stress, and perceived effectiveness. *Journal of Educational Administration*, 53(6), 773–793. <https://doi.org/10.1080/2159676x.2016.1221912>
- Hambali, I. M. (2019). Examining the relevance of Indonesian vocational high school career outcomes to the labor market. *Journal of Social Studies Education Research*, 10(1), 133–155.
- Hartinah, S., Suharso, P., Umam, R., Syazali, M., Lestari, B. D., Roslina, R., & Jermisittiparsert, K. (2020). Teacher's performance management: The role of principal's leadership, work environment and motivation in Tegal City, Indonesia. *Management Science Letters*, 10(1), 235–246. <https://doi.org/10.5267/j.msl.2019.7.038>
- Hartiwi, H., Anna Yu Kozlova, & Masitoh, F. (2020). The effect of certified teacher and principal leadership toward teachers' performance. *International Journal of Educational Review*, 2(1), 1–8.
- Heneman, H. G., Milanowski, A., Kimball, S., & Odden, A. (2006). Standards-Based Teacher Evaluation as a Foundation for Knowledge-and Skill-Based Pay. *Consortium for Policy Research in Education*, 5.
- Hilton, P. R., & Brownlow, C. (2004). *SPSS Explained*. Routledge.
- Huda, S., Tsani, I., Syazali, M., Umam, R., & Jermisittiparsert, K. (2020). The management of educational system using three law Auguste Comte: A case of Islamic schools. *Management Science Letters*, 10(3), 617–624. <https://doi.org/10.5267/j.msl.2019.9.018>
- Karweti, E. (2010). The influence of the principal's managerial ability and factors that influence work motivation on the performance of



- SLB teachers in Subang Regency. *Educational Research Journal*, 11(2), 77–89.
- Kreisman, D., & Stange, K. (2020). Vocational and career tech education in american high schools: The value of depth over breadth. *Education Finance and Policy*, 15(1), 11–44. [https://doi.org/10.1162/edfp\\_a\\_00266](https://doi.org/10.1162/edfp_a_00266)
- Marks, H. M., & Printy, S. M. (2003). Principal Leadership and School Performance: An Integration of Transformational and Instructional Leadership. *Educational Administration Quarterly*, 39(3), 370–397. <https://doi.org/10.1177/0013161X03253412>
- Medley, D. M., & Coker, H. (1987). The Accuracy of Principals' Judgments of Teacher Performance. *Journal of Educational Research*, 80(4), 242–247. <https://doi.org/10.1080/00220671.1987.10885759>
- Muhammad Arifin, H. (2015). The influence of competence, motivation, and organisational culture to high school teacher job satisfaction and performance. *International Education Studies*, 8(1), 38–45. <https://doi.org/10.5539/ies.v8n1p38>
- Mulyasa E. (2007). *Implementation of the 2004 Curriculum: KBK learning integration*. Roska Karya.
- PH, S. (2013). Pengembangan SMK Model Untuk Masa Depan. *Jurnal Cakrawala Pendidikan*, 32(1), 14–26. <https://doi.org/10.21831/cp.v5i1.1256>
- Rahardjo, S. (2014). The Effect of Competence, Leadership and Work Environment Towards Motivation and its Impact on the Performance of Teacher of Elementary School in Surakarta City , Central JAVA , Indonesia. *International Journal of Advanced Research in Management and Social Sciences*, 3(6), 59–74.
- Rahman, B., Abdurrahman, A., Kadaryanto, B., & Rusminto, N. E. (2015). Teacher-based scaffolding as a teacher professional development program in Indonesia. *Australian Journal of Teacher Education*, 40(11), 66–78. <https://doi.org/10.14221/ajte.2015v40n11.4>
- Retnaningsih, Suryani, N., & Yamtinah, S. (2019). The relationship between teacher competency test (UKG) and teacher's ability in applying 21st century learning a case study on history teachers of vocational high schools in surakarta city. *International Journal of Education and Social Science Research*, 2(04), 52–62.
- Rustiani, N. (2019). Desain jasa pendidikan pada madrasah ibtdaiyah alam islamic center ponorogo. *Muslim Heritage*, 3(2), 323–340.
- Suharsaputra, U. (2010). *Education administration*. Refika Aditama.
- Susanto, E., & Hosnani. (n.d.). Peran Kepala Sekolah dalam Membentuk Budaya Islami di MI Nasyatul Muta'allimin I Gapura Timur, Sumenep. *Re-JIEM*.
- Tangkilisan, H. N. S. (2005). *Public management*. Grassindo Jaya.
- Tansel, A. (1999). General versus Vocational High Schools and Labor Market Outcomes in Turkey. *SSRN Electronic Journal*, 1–32. <https://doi.org/10.2139/ssrn.263276>
- Taylor, E. S., & Tyler, J. H. (2012). The effect of evaluation on teacher performance. *American Economic Review*, 102(7), 3628–3651. <https://doi.org/10.1016/j.jpubeco.2019.01.001>
- Valentine, J. W., & Prater, M. (2011). Instructional, Transformational, and Managerial Leadership and Student Achievement: High School Principals Make a Difference. *NASSP Bulletin*, 95(1), 5–30.

<https://doi.org/10.1177/0192636511404062>

- Wenno, I. H. (2017). Effect of Principal Managerial Leadership and Compensation towards Physics Teacher Performance in Senior High School in Baguala District-Ambon. *International Education Studies*, *10*(1), 233. <https://doi.org/10.5539/ies.v10n1p233>
- Wijaya, I. P., & Lestarinigrum, A. (2019). Professionalism of Early Childhood Educator to Support Industrial Revolution 4.0 Based on Local Culture. *Indria*, *4*(2), 109–119.
- Wind, S. A., Jones, E., Bergin, C., & Jensen, K. (2019). Exploring patterns of principal judgments in teacher evaluation related to reported gender and years of experience. *Studies in Educational Evaluation*, *61*(August), 150–158. <https://doi.org/10.1016/j.stueduc.2019.03.011>
- Yogaswara, A., Fattah, N., & Sa'ud, U. S. (2010). Managerial Contribution of School Principals and Staffing Information Systems to Teacher Teaching Performance. *Journal of Educational Research*, *11*(2), 60–72.