



# The Effect of Academic Supervision and School Climate on Teacher Performance in Islamic Junior High School

Siti Rohmah<sup>1\*</sup>, Hadiyanto<sup>2</sup>, Irsyad<sup>3</sup>, Sulastri<sup>4</sup>, Nurjanah<sup>5</sup> 

<sup>1,2,3,4</sup> Education Administration Master Program, Universitas Negeri Padang, Padang, Indonesia

<sup>5</sup> Faculty of Social Science, Islamic Education Department, Universitas Negeri Padang, Padang, Indonesia

## ARTICLE INFO

### Article history:

Received July 29, 2023

Revised August 08, 2023

Accepted November 12, 2023

Available online November 25, 2023

### Kata Kunci :

Supervisi Akademik; Iklim Sekolah;  
Kinerja Guru

### Keywords:

Academic Supervision; School  
Climate; Teacher Performance.



This is an open access article under the  
[CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

Copyright ©2023 by Author. Published  
by Universitas Pendidikan Ganesha

## ABSTRAK

Penelitian ini dilatarbelakangi dari pengamatan masalah mengenai rendahnya kinerja guru di SMP yang menunjukkan bahwa supervisi akademik dan iklim sekolah masih belum sesuai dengan apa yang diharapkan dan kinerja guru masih belum optimal. Tujuan penelitian ini adalah untuk menganalisis pengaruh supervisi akademik dan iklim sekolah terhadap kinerja guru di SMP. Penelitian ini merupakan penelitian kuantitatif korelasional dengan jenis asosiatif. Populasi dalam penelitian ini adalah seluruh guru di SMP Perguruan Islam yang berjumlah 98 orang guru dan sampel ditentukan dengan menggunakan teknik nonprobability sampling dengan kategori purposive sampling yaitu cara pengambilan sampel dengan menetapkan ciri yang sesuai dengan tujuan penelitian diperoleh 63 orang guru. Instrumen Penelitian menggunakan angket dengan skala likert yang memiliki 5 alternatif jawaban. Sebelum angket tersebut digunakan sudah dilakukan uji coba untuk mengetahui validitas dan reliabilitasnya. Teknik analisis data dilakukan dengan menggunakan uji regresi linear berganda yang diolah menggunakan SPSS versi 24. Hasil analisis data menunjukkan bahwa terdapat pengaruh signifikan antara supervisi akademik dan iklim sekolah terhadap kinerja gurudengan nilai  $F_{hitung} > F_{tabel}$  ( $6,269 > 3,14$ ), maka terdapat pengaruh signifikan antara supervisi akademik dan iklim sekolah secara bersama-sama terhadap kinerja guru. Pada uji koefisien determinasi didapatkan  $r^2 = 0,145$  yang menunjukkan arti bahwa determinasi dari variabel supervisi akademik dan iklim sekolah terhadap kinerja guru adalah sebesar 14,5%.

## ABSTRACT

This research was motivated by observations of problems regarding the low performance of teachers in junior high schools which showed that academic supervision and school climate were still not in line with what was expected and teacher performance was still not optimal. The aim of this research is to analyze the influence of academic supervision and school climate on teacher performance in junior high schools. This research is a correlational quantitative research with an associative type. The population in this study were all teachers at Islamic College Middle Schools, totaling 98 teachers and the sample was determined using a non-probability sampling technique with a purposive sampling category, namely a sampling method by determining characteristics that were in accordance with the research objectives, obtaining 63 teachers. The research instrument uses a questionnaire with a Likert scale which has 5 alternative answers. Before the questionnaire was used, a trial was carried out to determine its validity and reliability. The data analysis technique was carried out using multiple linear regression tests which were processed using SPSS version 24. The results of data analysis showed that there was a significant influence between academic supervision and school climate on teacher performance with a value of  $F_{count} > F_{table}$  ( $6.269 > 3.14$ ), so there was a significant influence between academic supervision and school climate together on teacher performance. In the coefficient of determination test,  $r^2 = 0.145$  was obtained, which means that the determination of the academic supervision and school climate variables on teacher performance is 14.5%.

## 1. INTRODUCTION

Education is a hot topic of discussion today, education has a background in various aspects of life, and whether a country is progressing or not is based on quality education. Good education is of course based on systematic implementation and by educational planning, to achieve educational goals the roles of the school, especially teachers, are very important (Fatimah & Santiana, 2017; Suebsing & Nuangchalerm, 2021). The teacher is the controlling spear of education. According to UUSPN No. 20/2003 Chapter XI Article 39 Paragraph 2 states educators (teachers) are professionals whose job is to plan and implement the learning process and conduct coaching and training (Núñez-Canal et al., 2022). According to Law No. 14 of 2005, Article 1 explains that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood education

\*Corresponding author.

E-mail addresses: [nurjanah@fis.unp.ac.id](mailto:nurjanah@fis.unp.ac.id) (Siti Rohmah)

through formal education, basic education, and secondary education. According to the Regulation of the Minister of National Education, No. 16 of 2007 teachers must have professional, social, pedagogical, and personality competencies. The teacher is the center of consideration for schools and the majority of education policies focus on the role of the teacher, either directly or indirectly, as the main element in education (Fatimah & Santiana, 2017; Wibowo & Veronica, 2022). Therefore the teacher plays an important role in the world of education. The issuance of guidelines for implementing performance appraisal for SMP/MTs and MA/SMA teachers in 2000 became an indication within the Ministry of National Education. This assessment is a form of development in the field of education management and human resources, the implementation of which can be carried out periodically, continuously, and continuously (Mukhlisin, 2021; Wahjusaputri et al., 2020). This shows that teacher performance is of particular concern in the world of education. Teacher performance in learning plays an important role in encouraging the creation of an effective educational process, especially in instilling discipline and the quality of student learning outcomes. Teacher performance is a measure of the school's success in educating and shaping student character with the Constitution and Pancasila (Aji et al., 2019; Özgenel, 2019). Teacher performance is heavily influenced by various factors both from within and from outside the individual concerned. Performance can be interpreted as a manifestation of a teacher's efforts that are achieved by abilities and actions in certain situations. Optimal performance is the hope of all parties, but the facts on the ground show that there are still some teachers whose performance is not optimal (Cherng & Davis, 2019; Indajang et al., 2021; Timang et al., 2021).

The scope of teacher performance is indicated by several indicators, namely: (1) quality of work as measured by the teacher's perception of the feasibility of the job and the perfection of the task on the skills and abilities of employees. (2) The quantity of teachers, namely the amount produced is expressed in the amount of work produced. (3) the use of teacher time, namely the rate of absence, tardiness, effective working time/lost working hours. (4) cooperation between teachers in work (Lie et al., 2021; Medley et al., 2014). Thus, to become a teacher who performs well, also has accountability for the implementation of these competencies, of course, through strong efforts and desires within the teacher to make it happen. The efforts and desires of teachers to achieve educational goals can be realized when teachers are able to improve their performance. Basically, the more teachers fulfill all their needs at school, the higher the level of performance so that they are able to achieve educational goals (Alrwele, 2017; Ibrahim & Alamro, 2020). According to previous study the quality of good and professional teacher performance in implementing the curriculum in learning activities has the characteristics: (a) Designing lesson plans (b) implementing learning, and (c) assessing student learning outcomes (Hamidi, 2018). With the measurement of teacher performance, a school can find out the level of teacher performance so that the school can provide feedback on the results of performance measurement, encourage performance improvement, and make decisions so that the school has quality and highly competitive resources (Tasdemir et al., 2020; Widayati et al., 2021). However, there are still many problems related to teacher performance in a school. There are empirical problems related to teacher performance, including the teacher's ability to carry out work that is not satisfactory. This can be seen from the presence of some teachers who are still lazy in carrying out their work. The amount of work that has piled up and cannot be completed on time. Problems related to the ability of teachers must be resolved properly. The limitation of reliable teachers who master operations is a fundamental problem in improving performance. Efforts to improve the quality of human resources will also include improving managerial and operational capabilities. This research is in line with the results of research conducted by previous study which states that: 1) the quality of the teacher's work is quite good; 2) teacher communication has been carried out well; 3) the accuracy of the teacher's work is still lacking; 4) the teacher's work initiative is quite good; and 5) the work ability of teachers is still lacking (Gore et al., 2017; Sihombing, 2020). And if this situation is allowed to drag on, it will have an impact on teacher productivity.

Based on the observations made by the author at the ArRisalah Islamic Junior High School, Padang City, in reality, there are still problems in the work process and teacher work results regarding the performance of a teacher. This can be seen from the following phenomena: (1) There are still teachers who have not made lesson plans according to the set time limit. This is known in terms of speed and accuracy of work results that are not in accordance with what is expected by the leadership. (2) There are still teachers who are not optimal in implementing learning. Teachers do not yet have good quality at work, this can be seen from the lack of classroom management for students. (3) There are still teachers who do not understand their main duties and functions based on the position in which they are occupied. This can be seen from teachers who have not carried out learning evaluations, both during and after completing learning. Based on the phenomenon above, we can see that the teacher's performance at ArRisalah Islamic Junior High School, Padang City has not met the standards as expected. The low performance of teachers is suspected to be influenced by academic supervision. Therefore, the ArRisalah

Islamic Junior High School, Padang City, needs to increase academic supervision and school climate which must be implemented properly to achieve quality human resource management for agencies. Teachers will feel valued and there will be maximum success in human resources at ArRisalah Islamic Junior High School, Padang City. Based on the description above, the authors are interested in conducting deeper research to analyze the extent to which academic supervision and school climate influence teacher performance.

## 2. METHODS

This study uses a correlational quantitative method with the type of "associative" research (Cresswell, 2009), in which associative research is an attempt to determine the effect of independent variables (academic supervision and school climate) on the dependent variable (teacher performance). With this method, it is intended to investigate and analyze factors suspected to be the cause of the incident. The population of this study was a number of teachers at the ArRisalah Islamic Junior High School in Padang City with the following characteristics: a) registered as junior high school teachers at the ArRisalah Islamic College in Padang City, b) teachers who are still actively working at the ArRisalah Islamic College in Padang City. The total population in this study was 98 people with a total sample of 63 people.

The instrument used as a data collection tool in this study was a questionnaire, which was distributed to teachers at ArRisalah Islamic Junior High School, Padang City in the 2022/2023 school year. The questionnaire used is a Likert scale model questionnaire, with 5 alternative answers, namely Strongly Agree (SS), Agree (S), Less Agree (KS), Disagree (TS), and Strongly Disagree (STS) (Vagias, 2006). In order to obtain a good questionnaire and in accordance with the research intent, the questionnaire or instrument that has been prepared based on the instrument grid must first be tested on the instrument on respondents outside the research sample. The trial was carried out to obtain a Valid and Reliable questionnaire, so for that, after the trial questionnaire was distributed, a validity and reliability test of the questionnaire/instrument was carried out.

## 3. RESULT AND DISCUSSION

### Results

Research data at the ArRisalah Islamic Junior High School, Padang City were analyzed using the normality test, homogeneity test, multicollinearity test, and linearity test. The result of normality test is show in Table 1.

**Table 1. Summary of Normality Test Results**

Statistics		Academic Supervision	School Climate	Teacher Performance
N		63	63	63
Normal Parameters	Mean	0.0000000	0.0000000	0.0000000
	Std. Deviation	6.33404762	6.33404764	6.33404769
Most Extreme Differences	Absolute	0.091	0.097	0.098
	Positive	0.055	0.059	0.060
	Negative	-0.090	-0.092	-0.098
Test Statistic		0.088	0.094	0.098
Asymp. Sig. (2-tailed)		0.189 <sup>c,d</sup>	0.197 <sup>c,d</sup>	0.200 <sup>c,d</sup>

In Table 1 it can be seen that the significance value of each variable is greater than alpha 0.05. Thus the second requirement, namely data normality, has been fulfilled. Then a homogeneity test result is show in Table 2.

**Table 2. Homogeneity Test Results**

Variables	Levene Statistic	df1	df2	Sig.
School Climate	1.662	9	46	0.126
Academic Supervision	3.347	9	46	0.003

Based on Table 2, it can be seen that the results of the analysis of teacher performance (Y) which include academic supervision (X1) and school climate (X2) are homogeneous, which means that the variance of the Y group data on X1 and X2 is homogeneous. This means that the homogeneity requirements are met. Continue by multicollinearity test results that show in Table 3.

**Table 3. Multicollinearity Test Results**

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Academic Supervision	0.912	1.097
School Climate	0.912	1.097

From Table 3 above it can be seen that the academic supervision variable has a VIF value of 1.097 and a tolerance of 0.912 and school climate has a VIF value of 1.097 and a tolerance of 0.912. This means that the VIF (Variance Inflation Factor) value of the two independent variables is  $<10$  and the Tolerance value is  $> 0.1$ , thus it can be concluded that there is no multicollinearity problem or there is no relationship between the independent variables, namely academic supervision and school climate. The result of F-test is show in Table 4.

**Table 4. F-Test**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	519.820	2	259.910	6.269	0.003 <sup>b</sup>
Residual	2487.450	60	41.457		
Total	3007.270	62			

Based on Table 4, it is known that the F-count value is 6.269 (Sig 0.003  $<0.05$ ), meaning that simultaneously there is a significant influence between academic supervision (X1) and school climate (X2) on teacher performance (Y). When compared between the F-count values and F-table values, the F-count values  $>$  F-table (6.269  $>$  3.14). This means that the hypothesis proposed is acceptable, academic supervision and school climate together have a significant influence on teacher performance at the ArRisalah Islamic Junior High School, Padang City. The result of T test is show in Table 5.

**Table 5. T-test**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	50.154	15.361		3.265	0.002
Academic Supervision	0.164	0.110	0.183	2.118	0.038
School Climate	0.259	0.099	0.323	2.626	0.011

From the results of the analysis in Table 5 it can be seen that the tcount value for the academic supervision variable (X1) is 2.118  $>$  ttable 1.669 (sig 0.038  $<0.05$ ), then  $H_a$  is accepted. Thus it can be concluded that academic supervision has a significant effect on teacher performance at ArRisalah Islamic Junior High School, Padang City. Moreover it can be seen that the tcount for school climate (X2) is 2.626  $>$  ttable 1.669 (sig 0.011  $<0.05$ ), then  $H_a$  is accepted. Thus it can be concluded that school climate has a significant effect on teacher performance at ArRisalah Islamic Junior High School, Padang City.

## Discussion

### *The Effect of Academic Supervision on Teacher Performance*

Academic supervision is an activity carried out by supervisors by providing assistance to improve the quality of learning. Supervision or supervision is an inseparable part of efforts to improve student learning achievement and the quality of learning related to teacher performance (Hadiati, 2019; Strieker et al., 2016). Academic supervision is professional assistance to teachers, through cycles of systematic planning, careful observation, and prompt and objective feedback. In this way, the teacher can use the feedback to pay attention to his performance (Dwikurnaningsih & Paaais, 2022; Mulyasa, 2013). Performance can be interpreted as an achievement that appears as a form of work success in a person. Performance success is also determined by one's work and ability in that field and is also related to one's

job satisfaction. Work performance or work performance is an expression of ability based on knowledge, attitudes, skills, and motivation in producing something (Fattah, 2000; Nawawi, 2000). Thus, what is meant by teacher performance is all activities carried out by a teacher in carrying out his mandate and responsibility in educating, teaching and guiding, directing, and guiding students to reach their level of maturity and maturity. It is clear that teacher performance is basically more focused on the behavior of an educator in his work carrying out his duties and responsibilities as an educator so that he can have a big influence on students to achieve the desired goals (Fatimah & Santiana, 2017; Hadiati, 2019).

The results of this study indicate that academic supervision has a significant influence on teacher performance, the tcount value for organizational culture variable (X1) is  $2.118 > t_{table} 1.669$  (sig 0.038  $< 0.05$ ), then  $H_a$  is accepted. Thus it can be concluded that academic supervision has a significant effect on teacher performance at ArRisalah Islamic Junior High School, Padang City. The regression equation above illustrates that academic supervision has a significant effect on improving teacher performance. The effect of academic supervision on teacher performance is 16.4%. Based on the results of the descriptive analysis, it shows that academic supervision is in the good category with an average score of 84.73%. Meanwhile, when viewed from each research indicator, it can be seen that the highest indicator is planning an academic supervision program which is in the very good category (94.65% of the ideal score), while for the indicator with the lowest achievement is the indicator following up on the results of academic supervision which is at good category (80.79% of the ideal score). The results of the research that the author has carried out also support previous studies which said that academic supervision also influences teacher performance with a planning supervision value of 3.24%, implementation 3.67% and follow-up 3.13% (Dwikurnaningsih & Paais, 2022). Then Miftahul Lili Hasanah's research (2019) in his research revealed that academic supervision has a significant effect on teacher performance. This means that if academic supervision is created properly, this will have a significant influence on teacher performance.

### ***The Effect of School Climate on Teacher Performance***

School climate is an important factor affecting teacher performance in carrying out their duties because a conducive school climate has a positive effect on teachers in carrying out their duties (Syafuruddin, 2021; Taufan, 2022). Climate according to previous study is the quality of the environment that is continuously experienced by teachers, influencing behavior and based on the collective perception of their behavior (Wang et al., 2021). Other study also state that school climate is the end product of interactions between groups of students at school, teachers and administration teachers (administrators) who work to achieve a balance between organizational dimensions (school) and individual dimension (Lim et al., 2020; Su et al., 2021). A good school climate will have a positive impact on teacher performance in learning at SMP ArRisalah Padang.

The results of this study indicate that school climate has a significant influence on teacher performance, the tcount value for the school climate variable (X2) is  $2.626 > t_{table} 1.669$  (sig 0.011  $< 0.05$ ), then  $H_a$  is accepted. Thus it can be concluded that school climate has a significant effect on teacher performance at ArRisalah Islamic Middle School, Padang City. The regression equation above illustrates that school climate has a significant effect on improving teacher performance. The effect of school climate on teacher performance is 25.9%. Based on the results of the descriptive analysis, it shows that the school climate variable is included in the very good category with an average score (94.66%). Meanwhile, when viewed from each research indicator, it can be seen that the highest indicator is trust which is in the very good category (97.38% of the ideal score), while the indicator with the lowest level of achievement is an indicator of participation in decision making which is in the good category. (92.37% of the ideal score). It turned out that of the eight school climate indicators analyzed, it was found that the average level of achievement of the respondents was in the very good category. By being in the very good category, it is necessary to increase the school climate variable so that it can become a very good category. This means that the better the school climate that is accepted by the teacher, this will have a significant influence on improving teacher performance, but conversely the lower the school climate, the lower the teacher's performance. The results of the research that the authors have conducted also support previous studies which say that school climate has a positive and significant influence on teacher performance (Kwong & Davis, 2015). This shows that the better the school climate will have an impact on improving teacher performance.

### ***The Effect of Academic Supervision and School Climate on Teacher Performance***

The results of this study indicate that academic supervision and school climate have a significant relationship and provide a significant influence together to improve teacher performance. The magnitude of the influence of academic supervision and school climate together on teacher performance is 14.5%. Furthermore, the regression equation obtained by the variables of academic supervision and school

climate with teacher performance is  $50.154+0.164X_1+0.259X_2$ . This shows that academic supervision and school climate together have a significant influence on teacher performance. Data analysis shows that teacher performance is significantly influenced by academic supervision and school climate, both individually and collectively. Academic supervision and school climate are two very important factors to note. Academic supervision and school climate received by teachers will improve teacher performance (Dewi, 2021; Kartini et al., 2020). If viewed from the score achievement of the teacher performance variable at ArRisalah Islamic Junior High School, Padang City, it is in the very good category, the academic supervision variable is in the good category, and the school climate variable is in the very good category. Thus it can be believed that the variables of academic supervision and school climate if improved in a better direction will have a significant influence on teacher performance.

To improve teacher performance, systematic and planned efforts need to be made by creating good academic supervision and a school climate. Both of these are believed to improve teacher performance. Through improving academic supervision and school climate both independently and collectively, it will be able to improve teacher performance (Manfra, 2019; Taufan, 2022). The results of this study also revealed that when the sample was taken using a non-probability sampling technique with the category of purposive sampling, namely the sampling method by determining the characteristics that are in accordance with the research objectives. Taking samples through this technique the researcher aims at sample members who are specifically selected according to the research objectives. The researcher took all teachers with the status of Foundation Permanent Teachers (GTY) in ArRisalah Islamic Junior High School environment in Padang City. It was seen that teachers who had a long education and years of service had better performance. This can be seen from the results of the distributed questionnaire tabulation scores. The author also found that teachers who have worked for a long time, seen from their working period > 5 years, will have an understanding of the implementation of their duties and their performance is seen to be higher than teachers with a working period of < 5 years. Likewise with education. Some teachers who have a master's degree have higher performance because they have higher initiative and creative attitudes.

#### 4. CONCLUSION

Based on the results of the analysis in Chapter IV, it can be concluded as follows: (1) The results showed that academic supervision had a significant effect on teacher performance in ArRisalah Islamic Junior High School, Padang City. (2) The results of the study show that school climate has a significant effect on teacher performance. This indicates that the better the school climate that is accepted by teachers, it will be able to improve teacher performance in ArRisalah Islamic Junior High School, Padang City. (3). The results showed that academic supervision and school climate together had a significant effect on teacher performance in ArRisalah Islamic Junior High School, Padang City. This value is smaller than the total percentage of influence between academic supervision and school climate, this is due to the intersection of indicators for each variable. This shows that the better the academic supervision and the better the school climate that is accepted by the teacher, the better the teacher's performance will be.

#### 5. REFERENCES

- Aji, A. P., Martono, S., & Fakhruddin, F. (2019). The effect of teacher motivation in mediating commitment and professional competence on teacher's performance of vocational school in Blora regency. *Educational Management*, 8(2), 150–156. <https://journal.unnes.ac.id/sju/index.php/eduman/article/view/32889>.
- Alrwele, D. N. S. (2017). Effects of Infographics on Student Achievement and Students' Perceptions of the Impacts of Infographics. *Journal of Education and Human Development*, 6(3), 104–117. <https://doi.org/10.15640/jehd.v6n3a12>.
- Cherng, H.-Y. S., & Davis, L. A. (2019). Multicultural Matters: An Investigation of Key Assumptions of Multicultural Education Reform in Teacher Education. *Journal of Teacher Education*, 70(3), 219–236. <https://doi.org/10.1177/0022487117742884>.
- Cresswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (3rd ed.). SAGE Publications, Inc.
- Dewi, N. K. S. (2021). EFL Pre-Service Teachers' Perception of Their Readiness in Teaching Online during Covid-19 Pandemic. *The Art of Teaching English as a Foreign Language*, 2(2), 163–168. <https://doi.org/10.36663/tatefl.v2i1.172>.
- Dwikurnaningsih, Y., & Paais, R. L. (2022). Principal Academic Supervision: Performance, Problems and Solutions. *JPI (Jurnal Pendidikan Indonesia)*, 11(3), 425–436.

- <https://doi.org/10.23887/JPIUNDIKSHA.V11I3.46205>.
- Fatimah, A. S., & Santiana, S. (2017). Teaching in 21St Century: Students-Teachers' Perceptions of Technology Use in the Classroom. *Script Journal: Journal of Linguistic and English Teaching*, 2(2), 125. <https://doi.org/10.24903/sj.v2i2.132>.
- Fattah, N. (2000). *Ekonomi dan Pembiayaan Pendidikan*. Rosdakarya.
- Gore, J., Lloyd, A., Smith, M., Bowe, J., Ellis, H., & Lubans, D. (2017). Effects of professional development on the quality of teaching : Results from a randomised controlled trial of Quality Teaching Rounds. *Teaching and Teacher Education*, 68, 99–113. <https://doi.org/10.1016/j.tate.2017.08.007>.
- Hadiati, E. (2019). Pengaruh Supervisi Akademik Terhadap Kinerja Guru MTs Muhammadiyah Sukarame Bandar Lampung. *Komunika*, 1(2), 192–209. <https://doi.org/10.24042/komunika.v1i2.4749>.
- Hamidi, N. (2018). Pengembangan Media Pembelajaran Interaktif Pendidikan Agama Islam Berbasis Adobe Flash Professional Cs6 Untuk Mendukung Implementasi Kurikulum 2013. *Jurnal Pendidikan Agama Islam*, 14(1), 109–130. <https://doi.org/10.14421/jpai.2017.141-07>.
- Ibrahim, U. M., & Alamro, A. R. (2020). Effects of Infographics on Developing Computer Knowledge, Skills and Achievement Motivation among Hail University Students. *International Journal of Instruction*, 14(1), 907–926. <https://doi.org/10.29333/IJI.2021.14154A>.
- Indajang, K., Halim, F., & Sudirman, A. (2021). The Effectiveness of Teacher Performance in Terms of the Aspects of Principal Leadership , Organizational Culture , and Teacher Competence. *Proceedings of the 2nd Annual Conference on Blended Learning, Educational Technology and Innovation (ACBLETI 2020)*, 560(Acbleti 2020), 402–408. <https://www.atlantis-press.com/article/125957871.pdf>.
- Kartini, D., Kristiawan, M., & Fitria, H. (2020). The influence of principal supervision and organizational climate toward teacher's performance. *International Journal of Progressive Sciences and Technologies (IJPSAT)*, 20(1), 156–164. [https://www.researchgate.net/profile/Muhammad-Kristiawan/publication/341379494\\_The\\_Influence\\_of\\_Principal's\\_Leadership\\_Academic\\_Supervision\\_and\\_Professional\\_Competence\\_toward\\_Teachers'\\_Performance/links/5ebd581da6fdcc90d6753317/The-Influence-of-Principals](https://www.researchgate.net/profile/Muhammad-Kristiawan/publication/341379494_The_Influence_of_Principal's_Leadership_Academic_Supervision_and_Professional_Competence_toward_Teachers'_Performance/links/5ebd581da6fdcc90d6753317/The-Influence-of-Principals).
- Kwong, D., & Davis, J. R. (2015). School Climate for Academic Success: A Multilevel Analysis of School Climate and Student Outcomes. *Journal of Research in Education*, 25(2), 68–81. <https://eric.ed.gov/?id=EJ1098022>.
- Lie, D., Dharma, E., & Sudirman, A. (2021). Measurement of Teacher Performance in Pematangsiantar City Middle School Through Teacher Certification , Motivation , and Job Satisfaction. *Proceedings of the 2nd Annual Conference on Blended Learning, Educational Technology and Innovation (ACBLETI 2020) Measurement*, 560(Acbleti 2020), 396–401. <https://www.atlantis-press.com/article/125957882.pdf>.
- Lim, K., Nam, Y. O., Eom, S., Jang, Y., Kim, D., & Kim, M. H. (2020). Structural gender differences in LMS use patterns among college students. *Sustainability*, 12(11), 2–9. <https://doi.org/10.3390/su12114465>.
- Manfra, M. M. (2019). Action research and systematic, intentional change in teaching practice. *Review of Research in Education*, 43(1), 163–196. <https://doi.org/10.3102 /0091732X18821132>.
- Medley, D. M., Coker, H., Coker, J. G., Lorentz, J. L., Soar, R. S., & Spaulding, R. L. (2014). *Assessing Teacher Performance from Observed Competency Indicators Defined by Classroom Teachers* (Vol. 74, Issue 4, pp. 197–216). Routledge. <https://doi.org/10.1080/00220671.1981.10885311>.
- Mukhlisin, A. (2021). Kepemimpinan Kepala Sekolah Kunci Keberhasilan dalam Pencapaian Kualitas Pendidikan. *Journal Of Administration and Educational Management (ALIGNMENT)*, 4(2), 193–199. <https://doi.org/10.31539/alignment.v4i2.2566>.
- Mulyasa. (2013). *Manajemen dan Kepemimpinan Kepala Sekolah*. PT. Bumi Aksara.
- Nawawi, H. (2000). *Manajemen Sumber Daya Manusia* (G. M. U. Press (ed.)).
- Núñez-Canal, M., de Obesso, M. de las M., & Pérez-Rivero, C. A. (2022). New challenges in higher education: A study of the digital competence of educators in Covid times. *Technological Forecasting and Social Change*, 174. <https://doi.org/10.1016/j.techfore.2021.121270>.
- Özgenel, M. (2019). the Role of Teacher Performance in School Effectiveness. *International Journal of Education Technology and Scientific Researches*, 4(10), 417–434. <https://doi.org/10.35826/ijetsar.42>.
- Sihombing, M. (2020). The Effect of Transformational Leadership, Work Discipline, and Satisfaction on Lecturers' Performance at the Tarbiyah and Teaching Faculty of UIN Antasari Banjarmasin. *Journal of K6 Education and Management*, 3(2), 100–108. <https://doi.org/10.11594/jk6em.03.02.01>.
- Strieker, T., Adams, M., Cone, N., Hubbard, D., & Lim, W. (2016). Supervision matters: Collegial, developmental and reflective approaches to supervision of teacher candidates. *Cogent Education*,

- 3(1). <https://doi.org/10.1080/2331186X.2016.1251075>.
- Su, C.-Y., Li, Y.-H., & Chen, C.-H. (2021). Understanding the Behavioural Patterns of University Teachers Toward Using a Learning Management System. *International Journal of Emerging Technologies in Learning (IJET)*, 16(14), 129–145. <https://doi.org/10.3991/ijet.v16i14.22685>.
- Suebsing, S., & Nuangchalerm, P. (2021). Understanding and satisfaction towards stem education of primary school teachers through professional development program. *Jurnal Pendidikan IPA Indonesia*, 10(2), 171–177. <https://doi.org/10.15294/jpii.v10i2.25369>.
- Syafruddin, S. (2021). Pengaruh Iklim Sekolah Terhadap Kinerja Guru Dalam Pembelajaran Matematika Di Upt Sekolah Dasar Negeri Di Kecamatan Sukamaju. *Pedagogy: Jurnal Pendidikan Matematika*, 6(1), 67–79. <https://doi.org/10.30605/pedagogy.v6i1.1233>.
- Tasdemir, M., Iqbal, Z., & Asghar, Z. (2020). A Study of the Significant Factors Affecting Pre-Service Teacher Education in Turkey A Study of the Significant Factors Affecting Pre-Service TE in Turkey Background of the Study. *Bulletin of Education and Research*, 42(1). <https://eric.ed.gov/?id=EJ1258047>.
- Taufan, M. Y. (2022). Professional Development of Teachers, Competencies, Educational Facilities and Infrastructure on Teacher Performance and Learning Achievement of High School Students in Makassar City. *Golden Ratio of Social Science and Education*, 2(1), 24–38. <https://doi.org/10.52970/grsse.v2i1.168>.
- Timang, M., Nadeak, B., & Sihotang, H. (2021). the Influence of the Principal'S Managerial Ability, Training and Spiritual Intelligence on Teacher Performance At Smpn 1 Rantepao. *International Journal of Research-GRANTHAALAYAH*, 9(1), 248–256. <http://repository.uki.ac.id/4126/>.
- Vagias, W. M. (2006). Likert-type scale response anchors. *Clemson International Institute for Tourism & Research Development, Department of Parks, Recreation and Tourism Management. Clemson University*.
- Wahjusaputri, S., Fitriani, S., Indah Nastiti, T., & Syukron, A. (2020). Teaching Factory Model for Increasing the Competency of Vocational Secondary Education Students in Indonesian Territory. *International Journal of Innovation, Creativity and Change*, 11(1). <https://eric.ed.gov/?id=EJ1340976>.
- Wang, H., Peng, A., & Patterson, M. M. (2021). The roles of class social climate, language mindset, and emotions in predicting willingness to communicate in a foreign language. *System*, 99, 102529. <https://doi.org/10.1016/j.system.2021.102529>.
- Wibowo, T., & Veronica, J. (2022). IT Curriculum for Boot Camp : An Iterative Development In Applying OBE In Computer Science Education for Non-Formal. *Journal of Education Technology*, 6(4), 598–606. <https://ejournal.undiksha.ac.id/index.php/JET/article/download/51343/24581/155984>.
- Widayati, A., MacCallum, J., & Woods-McConney, A. (2021). Teachers' perceptions of continuing professional development: a study of vocational high school teachers in Indonesia. *Teacher Development*, 25(5), 604–621. <https://doi.org/10.1080/13664530.2021.1933159>.