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The Influence of Teachers' Professional Competence on the Quality of Learning at State Vocational Schools

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Abstract

Background – The quality of education in Indonesia remains a significant concern, reflected in its low rankings on the Human Capital Index (HCI) and Human Development Index (HDI). Specifically, at State Vocational High Schools (SMK Negeri) in Blora Regency, the primary challenges lie in the managerial competence of principals and the professional competence of teachers in improving learning quality. This research is grounded in the concept of human resource quality in education, referencing Ministerial Regulation of National Education (Permendiknas) No. 13 Year 2007 for principal competency standards and National Education Standards (SNP) Article 28 Paragraph 33-point c for teacher professional competence.
Purpose – This study aims to analyze the influence of both principals' managerial competence and teachers' professional competence on the quality of learning in State Vocational High Schools in Blora Regency.
Method/Approach – This research employs a quantitative approach with an *ex post facto* research design. The study sample consisted of 196 teachers selected using proportional random sampling. Data was collected through questionnaires utilizing a Likert scale. The data analysis included descriptive analysis, prerequisite tests, and hypothesis testing, specifically simple linear regression analysis.
Findings – The results indicate that both principals' managerial competence (average 153.98) and teachers' professional competence (average 142.3) were in the very good category, while the quality of learning (average 143.15) was categorized as fairly good. Hypothesis testing revealed a positive influence of principals' managerial competence on learning quality, expressed by the equation Y = 94.108 + 0.319X1, with a correlation of 0.325 and a contribution of 42.1%. Additionally, there was a positive influence of teacher professional competence on learning quality, expressed by the equation Y = 94.108 + 0.319X2, with a contribution of 23.8%.
Conclusions – This study concludes that both principals' managerial competence and teachers' professional competence have a positive and significant influence on the quality of learning in State Vocational High Schools in Blora Regency. Although both competencies are in the very good category, there is still room for improvement in learning quality, which is currently categorized as fairly good.
Novelty/Originality/Value – This research provides an in-depth understanding of the specific roles of principals' managerial competence and teachers' professional competence in enhancing learning quality within the context of State Vocational High Schools in Blora Regency. These findings can serve as a basis for education policymakers, principals, and teachers to develop more effective intervention strategies to improve human resource quality and, ultimately, the quality of vocational education.

Keywords: Principal's Managerial Competence, Teachers' Professional Competence, Learning Quality.

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INTRODUCTION

The quality of human resources plays a major role in determining the success of activities in various sectors of physical and non-physical development. Schools are one of the educational organizations that can be said to be a place to achieve national education goals (Kusnanto et al, 2023). The success of education in schools depends on the human resources in the school, namely the principal, teachers, students, administrative staff, and other educational staff. Quality human resources are independent, have a hard-working character, are diligent in learning, value time, never give up and are always proactive in finding solutions or problems faced. It is hoped that with quality human resources, they will be able to create a large, strong and dignified country which will ultimately create prosperity, welfare and progress in all fields. But on the other hand, education that is not of good quality because it applies the wrong pattern will produce low human resources, so that it is easy to be dictated by other countries. (Husaini & Fitria, 2019).

One of the educational problems faced by the Indonesian nation is the low quality of education at every level and education unit (Rafsanjani & Rozaq, 2024). This can be seen from the achievements achieved by each school which are not yet encouraging, the completeness of facilities and infrastructure, the competence of educators and teaching staff, and management in schools have not been touched evenly. Various efforts have been made to improve the quality of education through training, and improving teacher qualifications, procuring books and teaching tools, improving facilities and infrastructure and improving the quality of school management. However, various indicators show that the improvement in the quality of education has not shown an even increase.

Talking about the low level of education in Indonesia, it cannot be separated from the improvement of teacher competence and professionalism. Teachers are the most important element in the education process. Without teachers, education is only a slogan and image because all forms of policies in the education sector ultimately determine the achievement of educational goals. Teachers are the central point and the beginning of all educational development (Istiyono et al, 2021). Teacher professional competence is one of the important factors that influence the quality of learning in schools. This competence includes a deep understanding of the subject matter, the ability to manage learning, and the ability to adapt to technological developments and educational innovations. Quality is the result or outcome of a learning process or a result that is measured according to the best size or standard that has been or has been achieved in a learning process (Shofwan et al, 2023).

Another issue that is a problem is the low level of technology mastery among teachers, most teachers in regional schools still have difficulty integrating technology into the learning process (Astuti et al, 2021). In fact, digital competence is part of the professional competence of teachers which is very important in the era of education 4.0. For example, in some schools, the lack of adequate training and support from school management causes many teachers not to make maximum use of technology in teaching. In addition, the low professional competence of teachers often results in monotonous teaching methods and a lack of innovation in learning, which ultimately reduces student motivation and involvement in the learning process. Based on the results of the recapitulation of the competency achievements of graduates of State Vocational Schools in Blora Regency, we can see that vocational school graduates still lack the competence or expertise to enter the world of work that is licensed or certified, even from 2023 to 2024 all State Vocational Schools in Blora Regency experienced a very significant decline of 35.74%. In fact, vocational schools offer various expertise programs designed to meet the needs of various industries, such as engineering, technology, business management, tourism, and many more.

Through this vocational education approach, students in vocational schools are equipped with specific skills according to the expertise program they choose (Triatmaja & Shofwan, 2025). However, in reality, the competence of vocational school graduates is still very low, there is even a satirical expression that is developing in society that vocational schools are the largest contributor to unemployment. This is certainly inseparable from the professional

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ability of teachers in delivering material that encourages teachers to improve their abilities/skills through training or education and training. A teacher is a position that requires special skills and cannot be done by just anyone outside the field of education. In line with the opinion of Afriyanli and Sabandi (2020) the duties of a teacher as a profession include educating, teaching and training. Educating means continuing and developing life values. Teaching means continuing and developing science and technology, while training means developing skills in students. Regarding the results, teachers are said to be successful if they are able to change the behavior of most students towards better mastery of basic competencies.

In addition to limitations in training, an ineffective evaluation system is also a cause of low teacher professional competence. The implementation of teacher performance evaluations carried out in many schools is still administrative and pays little attention to aspects of professional development, such as pedagogical improvement and innovation in learning (Udovychenko et al, 2021; Novitasari & Shofwan, 2024). As a result, many teachers are not motivated to continuously improve their abilities and competences continuously. This underlines the need for reform in the teacher training and evaluation system that places more emphasis on improving professional competence in order to improve the quality of learning in schools.

From the results of observations so far, there are still many classic phenomena that still occur such as teachers who have not prepared learning devices, teachers still teach monotonously and tend to use old methods, there are still many teachers who arrive late when entering the class, there are still some teachers who are not disciplined, if the teacher is absent and does not enter the class without reporting to the teacher on duty or informing other teachers, then the teacher will receive a warning, if done for the second time, they will be sanctioned by the principal. Thus, the professional competence of teachers is an important variable that affects the quality of learning in schools (Karim et al, 2021). Further research is needed to understand how efforts to improve the professional competence of teachers can be implemented effectively, especially in State Vocational High Schools in Blora Regency, in order to create a higher quality and equitable education throughout the region.

METHODS

This study employed a quantitative approach with an ex post facto research design. The quantitative method was chosen to statistically analyze and test the causal relationships between the independent variables (principals' managerial competence and teachers' professional competence) and the dependent variable (learning quality). The ex post facto design was suitable as the research observed existing phenomena to identify cause-and-effect relationships without manipulating the variables. The population for this study encompassed all teachers at State Vocational High Schools (SMK Negeri) across Blora Regency, with the exact number sourced from the latest available data from the local education office or school records at the time of the research. A sample of 196 teachers was selected using proportional random sampling, ensuring that each teacher in the population had an equal chance of being chosen and that representation from each SMK Negeri was proportional to its teacher count. This sampling technique aimed to enhance the generalizability of the research findings.

Data collection was primarily conducted through questionnaires (surveys) designed with a 5-point Likert scale. These questionnaires were meticulously developed to measure three key variables: Principals' Managerial Competence, assessing teachers' perceptions of principals' abilities in planning, organizing, implementing, and supervising learning activities, in accordance with Permendiknas No. 13 Year 2007; Teachers' Professional Competence, gauging teachers' self-perceptions regarding their mastery of subject matter, pedagogical skills, professionalism, and self-development capabilities, as outlined in SNP Article 28 Paragraph 33-point c; and Quality of Learning, evaluating teachers' perceptions of the effectiveness of the learning process, student participation, resource utilization, and achievement of learning objectives. Each question item within the questionnaires was specifically designed to be relevant to the indicators of its

respective variable. The questionnaires were distributed directly to respondents or through appropriate digital platforms, adhering to research protocols.

To ensure the reliability and validity of the collected data, the research instruments (questionnaires) underwent rigorous testing. Validity testing was performed to confirm that each item in the questionnaire accurately measured what it intended to measure. This involved both construct validity, through expert review by education academics and school principal practitioners, and empirical validity, calculated by correlating individual item scores with total scores, with invalid items being revised or removed. Reliability testing assessed the consistency and stability of the instrument's measurements, indicating that a reliable questionnaire would yield consistent results upon repeated administration. This was determined using the Cronbach's Alpha coefficient, where a high value (typically > 0.6 or 0.7) signifies a reliable instrument.

The data analysis was systematically conducted using SPSS (Statistical Package for the Social Sciences). The initial step involved descriptive analysis to characterize the data for each variable, utilizing descriptive statistics such as mean, median, mode, standard deviation, minimum and maximum values, and frequency distributions to categorize the data (e.g., very good, good, fairly good, less good, poor). Following this, prerequisite tests (classical assumption tests) were performed to ensure the validity of subsequent regression analysis results. These tests included: Normality Test, to ascertain if the data followed a normal distribution, using methods like Kolmogorov-Smirnov or Shapiro-Wilk tests, or through histogram and Normal P-P plot observations; Linearity Test, to confirm a linear relationship between the independent and dependent variables, examined via the ANOVA Test for Linearity or scatter plot observations; and Heteroscedasticity Test, to verify that the variance of the residuals remained constant across all levels of the independent variables, using tests like Glejser, scatter plots, or Park tests. Finally, hypothesis testing was conducted to address the research objectives regarding the influence of the independent variables on the dependent variable. This involved simple linear regression analysis for each relationship, utilizing the general formula $Y=a+bX+e$, where Y represents Learning Quality (Dependent Variable), a is the constant, b is the regression coefficient, X is the Independent Variable (either Principals' Managerial Competence or Teachers' Professional Competence), and e accounts for error. The regression analysis results provided key statistical measures including the regression coefficient (b), significance value (p-value), correlation coefficient (R), and coefficient of determination (R2), indicating the extent of the independent variable's contribution to the dependent variable.

RESULTS AND DISCUSSION

Learning Quality

The statistical analysis of the Learning Quality (Y) variable, encompassing 196 respondents, revealed a minimum score of 106 and a maximum score of 170, with an average (mean) of 143.15 and a standard deviation of 14.354. This average score falls into the "fairly good" category, suggesting a moderate level of learning quality within the State Vocational High Schools in Blora Regency.

Table 1 Frequency Distribution of Respondents' Perception Scores on Learning Quality (Y)

	Category	Frequency	Percentage (%)
165 – 180	Very Good	37	18,88%
149 – 164	Good	58	329,59%
133 – 148	Quite Good	77	39,29%
117 – 132	Less Good	18	9,18%
101 – 116	Not Good	6	3,06%
Jumlah		196	100,00%

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Further detailed examination of respondent perceptions on Learning Quality, measured through 5 dimensions and 34 questionnaire items, showed a score range of 64. The data was categorized into five levels based on an interval class of 13. The distribution indicates that 39.29% (77 people) perceived learning quality as "quite good," followed by 29.59% (58 people) rating it as "good," and 18.88% (37 people) as "very good." A smaller proportion, 9.18% (18 people), rated it as "less good," and 3.06% (6 people) as "not good." The average score of 143.18, falling within the 133-148 interval, confirms that the overall Learning Quality at these schools is indeed in the Quite Good category.

Table 2 Frequency Distribution of Respondents' Perception Scores of Teachers' Professional Competence (X)

Interval	Category	Frequency	Percentage (%)
140 – 165	Very Good	56	28,57%
117 – 139	Good	78	39,80%
94 – 116	Quite Good	44	22,45%
71 – 93	Less Good	16	8,16%
48 – 70	Not Good	2	1,02%
Jumlah		196	100,00%

Table 3 Results of the Learning Quality Variable Dimension Test

Dimention	Initial	Extraction
Teacher Performance	1,000	.840
Learning Facilities	1,000	.809
Classroom Climate	1,000	.704
Student Attitudes	1,000	.937
Learning Motivation	1,000	.677

Extraction Method: Principle Component Analysis

An in-depth dimension test using Principal Component Analysis (PCA) on the Learning Quality variable highlighted the most influential factors contributing to it. As shown in Table 3, all five dimensions (Teacher Performance, Learning Facilities, Classroom Climate, Student Attitudes, and Learning Motivation) initially contributed fully to the analysis (Initial value of 1.000). The Extraction values, which indicate the proportion of variance explained by the main factors, revealed that Student Attitude (0.937), Teacher Performance (0.840), and Learning Facilities (0.809) were the most dominant dimensions. This finding, consistent with prior research (e.g., Palladan et al, 2023), underscores that to enhance learning quality, particular attention should be directed towards improving these three critical areas, whether through boosting teacher competence, providing more adequate facilities, or cultivating positive student attitudes toward the learning process.

Teacher Professional Competence

For the Teacher Professional Competence (X) variable, analyzed from 196 respondents, the scores ranged from a minimum of 112 to a maximum of 164, with an average (mean) of 142.30 and a standard deviation of 12.217. This average score places teacher professional competence in the very good category, indicating a high overall level of professionalism among teachers in State Vocational High Schools in Blora Regency. A detailed breakdown of perceptions, derived from 5 dimensions and 33 valid items, shows a score range of 117. The data was classified into five categories using an interval class of 23 (Seliya et al, 2021). The majority of respondents, 39.80% (78 people), rated teacher professional competence as "good," followed closely by 28.57% (56 people) who rated it as "very good." Smaller proportions were in the "quite good" (22.45%, 44 people), "less good" (8.16%, 16 people), and "not good" (1.02%, 2 people) categories. The average

score of 142.30 falls within the 140-165 interval, thereby confirming that Teacher Professional Competence in these schools is indeed in the very good category.

Table 4 Results of the Test of the Dimensions of Teacher Professional Competence Variables

Dimention	Initial	Extraction
Commitment to Student and The Learning Process	1,000	.618
Mastering Knowledge in Depth	1,000	.750
Planning and Implementing Learning	1,000	.794
Monitoring Student Learning Outcomes	1,000	.615
Dimensions of Learning from Experience	1,000	.847

Extraction Method: Principal Component Analysis.

The dimension test for Teacher Professional Competence, also utilizing Principal Component Analysis (PCA), identified the most significant contributors. As presented in Table 4, all dimensions (Commitment to Student and The Learning Process, Mastering Knowledge in Depth, Planning and Implementing Learning, Monitoring Student Learning Outcomes, and Dimensions of Learning from Experience) initially had full contributions (Initial value of 1.000). The Extraction values highlighted Dimensions of Learning from Experience (0.847), Planning and Implementing Learning (0.794), and Mastering Knowledge in Depth (0.750) as the three most dominant factors. This indicates that efforts to enhance teacher professionalism should prioritize reflection on teaching experiences, robust planning, and a deep mastery of subject matter (Lorensius et al, 2022). Although "Commitment to Students and the Learning Process" (0.618) and "Monitoring Student Learning Outcomes" (0.615) showed slightly lower contributions, they remain important for holistic teacher professionalism. High commitment and effective evaluation skills are crucial complements to the dominant factors.

Table 5 Results of the Kolmogorov Smirnov Normality Test for the Learning Quality Variable (Y)

One-Sample Kolmogorov-Smirnov Test

			Quality of Learning
N			196
Normal Parameters a.b	Mean		143,15
	Std. Deviation		14,354
	Absolute		,060
	Positive		,060
	Negative		-,058
Test Statistic			,060
Asymp. Sig. (2-tailed)c			,086
Monte Carlo Sig. (2-tailed)d	Sig.		,088
	99% Confidence Interval	Lower Bound	,081
		Upper Bound	,096

The normality test using the Kolmogorov-Smirnov method confirmed that both Learning Quality (Y) and Teacher Professional Competence (X) data sets were normally distributed. For Learning Quality (Y), the Exact Sig. (2-tailed) value was 0.086, which is greater than 0.05. Similarly, for Teacher Professional Competence (X), the Exact Sig. (2-tailed) value was 0.056, also greater than 0.05. These results indicate that the data meets the necessary prerequisites for regression analysis. The linearity test between Teacher Professional Competence (X) and Learning Quality (Y) also showed a linear relationship, with an F-calculated value of 0.951 and a significance value of 0.567. Since F-calculated (0.951) is less than F-table

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(2.64) and the significance value (0.567) is greater than 0.05, the linear relationship is confirmed, validating its use in correlation and linear regression analysis.

Table 6 Results of the Kolmogorov Smirnov Normality Test for the Teacher Professional Competence Variable (X)

One-Sample Kolmogorov-Smirnov Test

			Teacher Professional Competence
N			196
Normal Parameters a.b	Mean		142,30
	Std. Deviation		12,217
	Absolute		,063
	Positive		,056
	Negative		-,063
Test Statistic			,063
Asymp. Sig. (2-tailed)c			,056
Monte Carlo Sig. (2-tailed)d	Sig.		,058
	99% Confidence Interval	Lower Bound	,052
		Upper Bound	,064

The correlation test between Teacher Professional Competence (X) and Learning Quality (Y) yielded an r-count value of 0.246, with a significance level of less than 0.001. Given that the probability (0.001) is significantly smaller than 0.05 and the r-count (0.246) is greater than the r-table for N=196 (0.1395), a statistically significant correlation exists between Teacher Professional Competence and Learning Quality. However, the correlation coefficient of 0.246 suggests a low level of relationship between the two variables, falling within the 0.20 - 0.399 range.

Table 7 Results of Determination Test of X against Y

Model Summaryb

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.492a	.242	.238	6.261

The determination test further revealed that Teacher Professional Competence (X) accounts for 23.8% of the variance in Learning Quality (Y), as indicated by an R-squared value of 0.242, adjusted to 0.238. This implies a statistically significant influence of teacher professional competence on learning quality. However, the calculation of effective contribution (SE) and relative contribution (SR) using the provided formulas yielded negative values of -42.98% for SE and -40.16% for SR, which contradict the positive correlation and might suggest an error in the formula application or interpretation as typically contributions are positive percentages of explained variance.

The regression analysis indicated that Teacher Professional Competence (X) significantly affects Learning Quality (Y) partially, with a multiple linear regression equation of Y^=94.108+0.319X. This equation implies that an increase in Teacher Professional Competence leads to an increase in Learning Quality, and conversely, a decrease in competence results in a decrease in learning quality (Kulikowski et al, 2022). This finding aligns with previous research by Fachmi et al (2021), emphasizing that strong leadership from principals and the creativity of professional, innovative teachers are benchmarks for improving learning quality, as these elements directly interact with the learning process and build community trust. Similarly,

Lestari's (2023) research found that while teacher competence influences student learning achievement, the magnitude of this influence might vary, highlighting the continuous need for teacher capacity building to foster better student outcomes. This consistently supports the theoretical premise that professional teacher competence is a major influential factor in the learning process and ultimately determines student success (Ozcan, 2021; Asim et al, 2021; Kanya et al, 2021).

CONCLUSION

Based on the results of the research and discussion in the previous chapter, it can be The correlation of Teacher Professional Competence on the quality of learning has a positive and significant effect, the magnitude of the influence of Professional Competence is 23.8% with the regression equation $\hat{Y}$ = 94.108 + 0.319 X. Teacher Professional Competence has a positive and significant effect on the Quality of Learning in State Vocational High Schools in Blora Regency . The results of the study indicate that in professional competence the lowest value is by carrying out reflective actions, the lowest principal managerial skills variable is conceptual skills in the teacher motivation variable, the lowest value is extrinsic. So some suggestions that can be made are as follows: Teachers can take time routinely to reflect on their learning practices by making reflection journals, discussing with colleagues or actively participating in mentoring programs in developing themselves such as attending training, workshops or conferences.

REFERENCES

Afriyanli, H. K., & Sabandi, A. (2020). Pengaruh Supervisi Kepala Sekolah Terhadap Kinerja Guru. *JMKSP (Jurnal Manajemen, Kepemimpinan, dan Supervisi Pendidikan)*, *5*(1), 51-55. https://doi.org/10.31851/jmksp.v5i1.3520

Asim, H. M., Vaz, A., Ahmed, A., & Sadiq, S. (2021). A Review on Outcome Based Education and Factors That Impact Student Learning Outcomes in Tertiary Education System. *International Education Studies*, *14*(2), 1-11. https://doi.org/10.5539/ies.v14n2p1

Astuti, M., Arifin, Z., Mutohhari, F., & Nurtanto, M. (2021). Competency of Digital Technology: the Maturity Levels of Teachers and Students in Vocational Education in Indonesia. *Journal of Education Technology*, *5*(2), 254-262. https://doi.org/10.23887/jet.v5i3.35108

Fachmi, M., Mustafa, M., & Ngandoh, A. M. (2021). The Role of Motivation and Professional Competence in Improving Teacher Performance. *Journal of Digital Learning and Education*, *1*(1), 39-46. https://doi.org/10.52562/jdle.v1i01.14

Husaini, H., & Fitria, H. (2019). Manajemen Kepemimpinan pada Lembaga Pendidikan Islam. *JMKSP (Jurnal Manajemen, Kepemimpinan, dan Supervisi Pendidikan)*, *4*(1), 43-54. https://doi.org/10.31851/jmksp.v4i1.2474.

Istiyono, E., Kartowagiran, B., Retnawati, H., Cahyo Adi Kistoro, H., & Putranta, H. (2021). Effective Teachers' Personality in Strengthening Character Education. *International Journal of Evaluation and Research in Education*, *10*(2), 512-521. https://doi.org/10.11591/ijere.v10i2.21629

Kanya, N., Fathoni, A. B., & Ramdani, Z. (2021). Factors Affecting Teacher Performance. *International Journal of Evaluation and Research in Education*, *10*(4), 1462-1468. https://doi.org/10.11591/ijere.v10i4.21693

Karim, A., Kartiko, A., Daulay, D. E., & Kumalasari, I. D. (2021). The Effect of the Supervision of the Principal and the Professional Competency of Teachers on Teacher Performance in Private MI in Pacet District. *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam*, *6*(3), 497-512. https://doi.org/10.31538/ndh.v6i3.1686

Kulikowski, K., Przytuła, S., & Sułkowski, Ł. (2022). E-learning? Never again! On the Unintended Consequences of COVID-19 Forced e-Learning on Academic Teacher Motivational Job Characteristics. *Higher Education Quarterly*, *76*(1), 174-189. https://doi.org/10.1111/hequ.12314

e-ISSN 0216-0847
https://journal.unnes.ac.id/journals/LIK

Kusnanto, N., Sukristyanto, A., & Rochim, A. I. (2023). Relevance Of National Education Policies As An Effort To Improve The Quality Of Madrasah Tsanawiyah Education Services. *The Spirit Of Society Journal: International Journal of Society Development and Engagement*, *6*(2), 136-151. https://doi.org/10.29138/scj.v6i2

Lestari, S. (2023). Pengaruh Kompetensi Guru Terhadap Prestasi Belajar Siswa:(Survei Pada Mata Pelajaran Ekonomi Kelas XII MA Ma'Arif NU Cimanggu Kabupaten Cilacap). *Jurnal Ilmu Pendidikan Dan Psikologi*, *1*(1), 32-37. https://journal.pipuswina.com/index.php/jippsi/article/view/7

Lorensius, L., Anggal, N., & Lugan, S. (2022). Academic Supervision in the Improvement of Teachers' Professional Competencies: Effective Practices on the Emergence. *EduLine: Journal of Education and Learning Innovation*, *2*(2), 99-107. https://doi.org/10.35877/454RI.eduline805

Novitasari, N., & Shofwan, I. (2024). The Effect of Educators' Pedagogical Competence on the Critical Thinking Ability of Equivalency Education Learners. *Edukasi*, *18*(1), 36-44. https://doi.org/10.15294/edukasi.v18i1.7318

Ozcan, M. (2021). Factors aAecting Students' Academic Achievement According to the Teachers' Opinion. *Education Reform Journal*, *6*(1), 1-18. https://www.ceeol.com/search/article-detail?id=1010667

Palladan, A. A., AbdulKadir, K., & Ahmad, M. A. (2023). Using Principal Component Analysis to Explore Managerial Factors Influencing Lecturers' Job Performance: A Perspective from Nigeria. *International Journal of Management in Education*, *17*(4), 374-395. https://doi.org/10.1504/IJMIE.2023.131216

Rafsanjani, T. A., & Rozaq, M. A. (2024). Educational Problems in Indonesia. *Solo Universal Journal of Islamic Education and Multiculturalism*, *2*(02), 135-144. https://doi.org/10.61455/sujiem.v2i02.197

Seliya, N., Abdollah Zadeh, A., & Khoshgoftaar, T. M. (2021). A Literature Review on One-Class Classification and its Potential Applications in Big Data. *Journal of Big Data*, *8*(1), 122-130. https://doi.org/10.1186/s40537-021-00514-x

Shofwan, I., Malik, A., & Gupta, S. (2023). Information Technology Ability Factors on Educator Performance that Have an Impact on the Quality of Learning in Equality Education. *Lembaran Ilmu Kependidikan*, *52*(1), 9-15. https://doi.org/10.15294/lik.v52i1

Triatmaja, F., & Shofwan, I. (2025). The Role of Vocational Training Institutions as Non-Formal Education Centers in Fostering Independence. *Indonesian Journal of Society Innovation Studies*, *4*(1). https://edurasia.org/index.php/IJSIS/article/view/73

Udovychenko, L., Androshchuk, I., Bigus, O., Gorbatova, N., & Gytnyk, I. (2021). Innovative methods in improving the pedagogical skills of teachers. *Laplage Em Revista*, (7), 68-76. https://doi.org/10.24115/S2446-622020217