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The Influence of Principal Academic Supervision, Lead Teacher Competence, and Work Environment on Lead Teacher Capacity

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Abstract

The discourse on teacher leadership in developing contexts has long suffered from a narrow gaze, obsessed with competencies, yet blind to conditions; fixated on training, yet inattentive to power. This study disrupts that pattern. Anchored in the evolving landscape of Indonesia's Guru Penggerak (Mobilizing Teacher) program, we offer a systems-level examination of what truly drives teacher capacity in public elementary schools. Through a robust quantitative analysis, we illuminate the triadic architecture of capacity-building: principled supervision, professionally grounded competence, and an ecologically supportive work environment. The results are not subtle; together, these factors explain 93.4% of the variance in mobilizing teacher capacity. But the implication is not merely statistical. It is structural, cultural, and political. We argue that academic supervision must be reimagined, not as a mechanism of oversight but as a dialogic practice of pedagogical stewardship. Teacher competence must be untethered from static checklists and understood as a socially constructed, morally anchored, and continuously evolving enactment of professionalism. The work environment, too often treated as backdrop, is revealed here as a core determinant of whether teacher leadership is cultivated or crushed. This is not a call for more policy, it is a demand for coherence. Without structural alignment among leadership practices, professional learning ecosystems, and institutional cultures, no reform initiative, no matter how visionary, will outlive its training modules.

Introduction

The PGP program has been designed to produce optimally performing Indonesian teachers, making performance a key topic of discussion. Performance is considered as one of the key indicators used to evaluate the operational efficiency of an organization. The sustainability of an organization's operational capabilities, including in educational institutions such as schools, is determined by its performance (Roosa & Mischen, 2022; Akram et al., 2018). Therefore, serious attention is given by the Ministry of Education, Culture, Research and Technology (MoEC), as the main authority in the field of education, to the performance of teachers in schools, particularly to their strategic role in the development of quality learning processes that focus on the needs of learners.

The Guru Penggerak program is designed as leadership education for teachers to become leaders in learning. This program makes learning leaders student-centered (kemdikbud.go.id). The capacity of teacher motivators in Tangerang City public primary schools based on researcher observations in a school or education system can be a serious problem because they have an important role in motivating students, inspiring them to learn and improving learning outcomes.

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The capacity of teacher motivators in public primary schools in Tangerang City based on researcher observations in a school or education system can be a serious problem if the results of education and training have been carried out for at least 6 (six) months and they have an important role in motivating students, inspiring them to learn, and improving learning outcomes. To improve the capacity of teacher mobilizers, it is important to identify the factors that influence their low performance and take appropriate measures (Darling-Hammond, 2010; Mwendwa & Gikandi, 2024). This can include providing better support and training, reducing work overload, making the work environment healthier, supporting each other, and ensuring that mobilizer teachers feel loved and encouraged to perform their roles to the best of their ability.

Principal based on the regulation of the Minister of Education and Culture No. 13 of 2007, a competency that needs to be mastered and possessed by the Principal as a supervisor of learning in the classroom. Therefore, principals need to recognize several concepts of academic supervision for the basis of the principal's job knowledge (Dwikurnaningsih & Paais, 2022; Julianda et al., 2024; Karim et al., 2021; Salendab & Dapitan, 2021). Principals must also have the authority and skill to influence change in the school, and lack of resources, sometimes lack of resources such as sufficient funds or personnel can hinder the principal's ability to conduct efficient supervision. Improving principal supervision can improve educational competence in schools. Supervision in a planned, structured and sustainable manner plays an important role in guiding teacher movers to achieve optimal professional competence (Setyosari, 2013; Julianda et al., 2024; Stronge & Xu, 2021; Warman, 2022; Galdames-Calderón, 2023; Nurhadi et al., 2023). In addition, the individual competencies of the teacher movers, from the pedagogical, professional, social and personality aspects, determine their success in implementing the change program in schools (Directorate General of GTK, 2020). Based on the above, academic supervision from school principals is needed to increase the capacity of teacher movers.

The Guru Penggerak program is a leadership education initiative aimed at Indonesian teachers. It has been implemented by the Ministry of Education, Culture, Research and Technology (Kemendikbudristek, 2020) since 2020. The initiative is designed to produce teachers who are able to act as leaders in learning, agents of change, and drivers of transformation in the education ecosystem.

In order to be recognized as a Promoter Educator, an educator is required to successfully go through the selection process and participate in the Promoter Educator Education Program (PPPG) (Warta et al., 2024; Khairani et al., 2024). The program is nine months in length. In the PPPG, educators are equipped with an understanding of the concepts and practices of learner-oriented learning, while being facilitated and assisted to develop leadership capabilities. Competence is defined as an individual's ability to carry out a task optimally and efficiently (Savanevičienė et al., 2008; Gilbert, 2013). The competencies possessed by the driving teacher include the realm of attitudes, skills, behaviors, and knowledge needed so that the responsibility and role as a learning facilitator to the perpetrator of change can be carried out properly (Sumantoro & Mukhsim, 2024).

Low teacher motivator competencies can be a serious problem in trying to motivate and inspire students and improve learning outcomes (Taufan & Basamalah, 2021; Amtu et al., 2020; Williams & Williams, 2011; Misbah et al., 2011). First, teacher motivator competencies and competencies that must be possessed can foster the development of others or themselves and the surrounding environment. A motivator teacher can also be an active pioneer to appeal to

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the school community to be able to carry out a profession in the organization (Ogunode et al., 2023; Dursun & Bilgivar, 2022).

According to the Mentor Teacher Education Program Guidelines, mentor teacher capabilities are grouped into five main domains. One of them is:

Pedagogical Capability: the ability of teachers to design, implement, assess and reflect on the learning process that is oriented towards the needs of students. The role of parents and the community will often be involved. This capability includes various points, such as understanding learners' idiosyncrasies, curriculum development, applying learning strategies, using authentic assessment, utilizing educational technology, strengthening digital literacy, and paying attention to learners' welfare. Professional Capability: The capacity of teachers to develop independently with peers through a process of reflection, experience sharing, and collaboration. Professional competence includes various aspects, such as understanding the vision of educational institutions, educator expertise standards, professional code of ethics, career development, classroom action research, preparation of scientific papers, and the formation of professional networks.

Personal Capability: A teacher's personal capability is reflected in the maturity demonstrated in the moral, emotional, and spiritual domains, and is manifested through attitudes and actions that are in accordance with the ethical norms of the profession. Aspects of individual competence include various dimensions, including integrity of character, honest behavior, a sense of responsibility, the ability to understand the feelings of others, respect for differences, cooperation, effective communication skills, dispute resolution skills, and mental toughness in the face of pressure.

Social Capability: Collaboration between teachers and parents and the community is an important factor in developing school institutions and strengthening students' leadership skills. The social competence aspect includes various dimensions, including understanding the social and cultural background of the school environment and the surrounding community, involvement in community institutions or organizations, efforts to fight for the interests of education, increasing the capacity of the role of parents and the community, and providing facilities to help develop the potential of students.

Coordinator Capability: The ability of educators to organize and direct various efforts to realize the vision of the institution that is responsive to the needs of students and in line with the expectations of the community around the school is an important aspect. Competence in educational leadership covers various domains, including understanding the theories and paradigms of leadership in education, preparing long-term development schemes for institutions, optimizing the utilization of school resources, providing academic coaching to colleagues, participatory decision-making processes, and driving innovation and continuous quality improvement.

The work environment is the overall physical and non-physical aspects around where a teacher carries out his professional duties. Physical aspects include facilities, infrastructure, and workspace conditions, while non-physical aspects include interpersonal relationships with colleagues and superiors, organizational culture, school climate, and the support and recognition received (Noya, 2024; Essandoh, 2022; Kilag et al., 2023; Kwarteng, 2022). In the context of education, a comfortable work environment is believed to play an important role in supporting teacher effectiveness and well-being. As a result, it can have an effect on the weight of their performance and learning process.

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Several previous studies have shown that principal supervision has a major effect on the working level of teachers (Suriagiri et al., 2022; Efendi et al., 2022; Khan, 2025; Liu et al., 2021). On the other hand, a supportive work environment, with good collaboration among teachers, support from the principal, and a culture of innovation, was shown to be positively correlated with more effective and student-centered learning practices (Abdallah et al., 2024; Kong & Wang, 2024; Pan, 2023), although in some results, educational variables did not always show a partially significant effect.

Other findings also show that mastery of pedagogical, personality, social, professional and overall leadership competencies plays a major role in supporting teachers' capacity (Estiani & Hasanah, 2022; Orynbekova et al., 2024; Johari et al., 2022). And until now, there has been no in-depth review examining the linkages between academic supervision, mentor competencies and, given the role of mentor teachers as agents of change, understanding how the working environment in their schools supports or hinders the implementation of the good practices they bring is particularly relevant. A positive work environment can be a catalyst for the success of the Guru Penggerak program.

This analysis reveals that optimal conditions are not in line with reality, which shows different facts. Education in Indonesia currently shows that the performance of educators has not reached expectations, including in public primary schools in Tangerang City. Therefore, it is crucial to examine the factors that have the potential to influence educator performance. The concept of educator performance is evolving along with research directed at the elements that impact educator performance. Based on the literature review and research gaps, the researcher is motivated to conduct a study entitled: "The Influence of Principal's Academic Supervision, Driver Educator Capability, and Working Environment Conditions on Driver Educator Performance in Public Elementary Schools in Tangerang City.

Methods

The research design applied in this study used a quantitative research design, which employed multiple linear regression analysis procedure in educating itself on the degree of influence of principal academic supervision, lead teacher competence, and school work environment on the ability to mobilize teachers (Guru Penggerak) of the public elementary schools in Tangerang City. Four hypotheses were tested in the study to refer to partial and simultaneous impact of the three independent variables on the dependent one.

The sample of the study was the mobilizing teachers (teacher movers), the 5 th and 7 th cohort in government elementary schools in Tangerang City. The proportionate representation was achieved by selecting a sample via a purposive proportional random sampling method where the sample will consist of 52 respondents among whom 24 will belong to the 5th cohort and 28 will be from the 7th cohort. This was the sampling procedure to that it would zero in on those personnel who had been through comparable training procedures who would be likely to prescribe on similar professional courses, thereby producing a unitary context in terms of recognition.

A structured questionnaire of 25 items of Likert scale, 1 (strongly disagree) to 5 (strongly agree) was used to collect data. The three independent variables (Principal Academic Supervision (X1), Lead Teacher Competence (X2), Work Environment (X3)) were all operationalized into five items each, and the dependent variable (Teacher Capacity (Y)) was gauged based on ten items that involved the key teaching performance scales which included instructional planning, content delivery, class management as well as student engagement.

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Before the actual data were collected, the instrument was first validated and tested on reliability using the pilot sample of 30 teacher movers who were out of the main study sample. The findings revealed that the construct validity through corrected values of item-total correlation was valid since all the 25 items had a value of over 0.361. Also, it was found that Cronbach&#146 stupidLY topheels caliburns Alpha coefficient of the instrument was 0.967, which has shown a high degree of internal consistency and reliability. After collecting data in the target respondents, a set of classical assumption tests was undertaken to test the suitability of data to be used in regression analysis. The chi-square test revealed that the normality of distribution was also proved graphically by means of a histogram and the P-P plot. The Durbin-Watson (DW) statistic was used to check the autocorrelation, and the result obtained was 1.749 lying within the acceptable range ($du < DW < 4 - du$) and therefore there is no autocorrelation. The variance inflation factor (VIF) scores were also calculated to check the level of multicollinearity, and they were all less than 10 (7.545, 5.938 and 6.073 points respectively), which showed that the independent variables were not too close to each other. A scatter plot of residuals which was random and lacked a pattern was used to test the heteroscedasticity implying that there was homoscedasticity.

After all assumptions were satisfied, multiple linear regression analysis was conducted with the assistance of SPSS version 26. It obtained the regression equation:

$Y = 0.541 + 0.912 X 1 + 0.580 X 2 + 0.486 X 3 + e,$

where Y shows the teacher capacity, X1 shows the principal academic supervision, X2 shows the teacher competence and X3 shows the work environment.

Table 1. Conceptual and Operational Definition

Variable	Conceptual Definition	Operational Definition
Teacher Capacity	The performance demonstrated by teachers in carrying out tasks such as teaching, mentoring, guiding, and assessing students, reflected through professional behavior and results.	Measured using 10 indicators in the questionnaire: (1) lesson planning, (2) content delivery, (3) teaching approach variety, (4) classroom management, (5) understanding of students, (6) use of instructional aids, (7) assessment implementation, (8) problem-solving for student learning issues, (9) time discipline, and (10) communicative interaction. All measured on a 5-point Likert scale.
Principal Academic Supervision	A process of professional enhancement conducted by school principals to improve learning quality through systematic observation, evaluation, and feedback.	Measured through 5 indicators: (1) frequency of supervision, (2) feedback after supervision, (3) impact on teaching methods, (4) periodic classroom observations, and (5) provision of solutions to teaching challenges. Responses were rated on a Likert scale from 1 (strongly disagree) to 5 (strongly agree).
Teacher Competence	A set of knowledge, skills, and behaviors that must be possessed and mastered by a teacher in performing their professional duties effectively and ethically.	Measured using 5 indicators: (1) mastery of subject matter, (2) varied teaching strategies, (3) communication skills, (4) understanding of student characteristics, and (5) lesson plan preparation. Each item

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		was rated using a 5-point Likert scale to gauge perceived competence levels.
Work Environment	All physical and non-physical aspects surrounding the workplace that can influence the well-being, motivation, and performance of teachers.	Measured using 5 indicators: (1) relationships with coworkers (support, harmony), (2) relationship with principal (communication, trust), (3) facilities and infrastructure availability, (4) school culture (innovation support, norms), and (5) workload perception (balance between duties and resources). Items were assessed on a 5-point Likert scale based on teacher perceptions.

It is identified that R 2 is 0.934 and the percentage of variance explained by the three predictors of the teacher capacity is 93.4. The overall model was found to be significant by F-test ($p < 0.05$) and the independent variables were significant in their effect as calculated through t-tests ($p < 0.05$), thereby suggesting that the four research hypotheses were true. In order to contribute better clarity to the construct, conceptual and operational definitions of all variables were made clear. The idea of educator capacity was described as the level of careerism in the teaching-related activities and operationalized into ten indicators of performance. Principal academic supervision was defined as the structured, formative guidance principals provide to improve teaching quality, measured through five aspects, including supervision frequency and post-observation feedback. Teacher competence was grounded in pedagogical and professional skills such as lesson planning and classroom communication. Finally, the work environment was assessed through perceptions of interpersonal relationships, infrastructure, school culture, and workload balance.

Results and Discussion

The research data from the unit of analysis in this study is the SDN Driver Teachers collected from the 5th batch and 7th batch of SDN Driver Teachers in Tangerang City, totaling 105 people, then using the Purposive Proportional Random Sampling method, 52 respondents were obtained with details of 24 people from the 5th batch, and 28 people from the 7th batch.

Before the research questionnaire was distributed to the 52 research respondents, a reliability test and validity test were previously made on the questionnaire (the instrument in this observation), which consisted of 25 question items for one dependent variable and three independent variables. The validity test and reliability test were used through distributing questionnaires to 30 respondents of Teacher Movers who were not respondents in this study. The results of the validity and reliability tests are as follows: It was found that all question item values, from Q1, Q2, Q3, ..., Q25 are all worth more than 0.361. So that all questions are valid and can be used for research. The Cronbach's Alpha value of 0.967 suggests that the 25 question items in this study are very reliable to use.

After the validity and reliability of the instrument had been confirmed through a series of tests, by utilizing SPSS version 26 software, the questionnaire was then distributed to 52 participants who were determined as samples in this study. Before further statistical analysis is carried out, classical assumption testing is first carried out which includes normality testing, autocorrelation testing, multicollinearity testing, and heteroscedasticity testing. The results obtained from these tests are described as follows:

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Normality Test

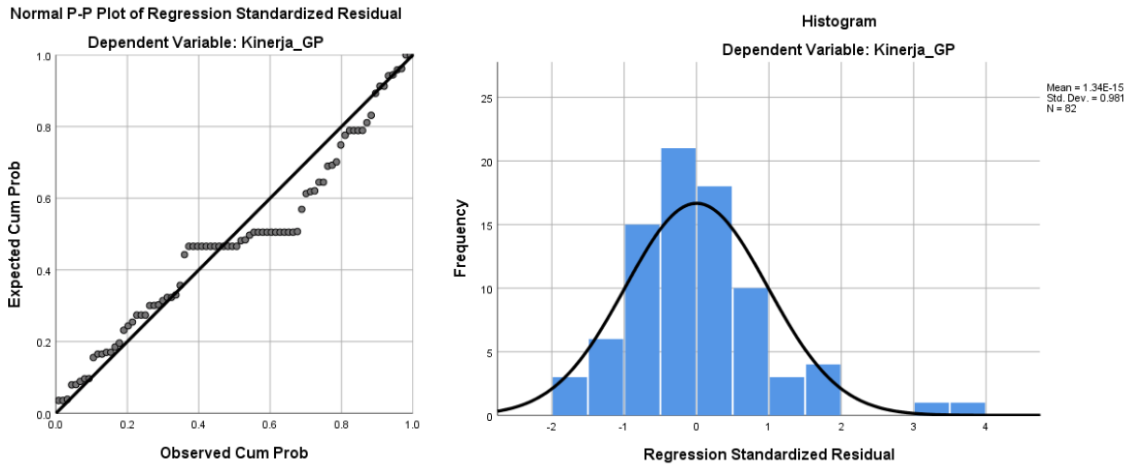

Figure 1. Normality Test

In the P-P Plot graph, it can be noted when the research data is along the diagonal line, this indicates that the data used is normally distributed, as well as the graph from the histogram that the resulting data spreads normally.

Autocorrelation Test

The following is part of the DW table which is used to see if there is autocorrelation in the research variables, with the rule du < DW < 4 - du. In the results of data processing with SPSS Ver 26, the DW value is 1,749, while the results after using the DW table are as follows:

Table 1. Value Data for Interval 50–54

50	1.5035	1.5849	1.4625	1.6283	1.4206	1.6739	1.3779	1.7214	1.3346	1.7708
51	1.5086	1.5884	1.4684	1.6309	1.4273	1.6754	1.3855	1.7218	1.3431	1.7701
52	1.5135	1.5917	1.4741	1.6334	1.4339	1.6769	1.3929	1.7223	1.3512	1.7694
53	1.5183	1.5951	1.4797	1.6359	1.4402	1.6785	1.4000	1.7228	1.3592	1.7689
54	1.5230	1.5983	1.4851	1.6383	1.4464	1.6800	1.4069	1.7234	1.3669	1.7684

1.4339 < **1.749** < 4- 1.4339

1.4339 < 1.749 < 2.5661; there is no autocorrelation.

Multicollinearity Test

Based on the results of data processing using SPSS software version 26 in the VIF Statistics column, the values obtained for each independent variable, namely the Principal's Academic Supervision, the Capacity of Teachers, and the Working Environment, were all recorded below 10, with values of 7.545, 5.938, and 6.073, respectively. From these results, it can be concluded that the relationship between the independent variables does not show any significant correlation.

Tabel 2. Koefisien Regresi (Coefficients)

Coefficientsa[a]									
Model	**Ustd Coef**		**Std Coef**			**95.0% Confidence Interval for B**		**Collinearity Statistics**	
	B	**Std. Error**	**Beta**	**t**	**Sig.**	**(Lower Bound)**	**(Upper Bound)**	**Tolerance**	**VIF**
1									
(Constant)	0.541	1.301	-	0.416	.679	-2.048	3.130	-	-

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Supervision _K	0.912	0.158	0.460	5.782	.000	0.598	1.226	0.133	7.545
Competent _G	0.580	0.142	0.289	4.099	.000	0.298	0.862	0.168	5.938
Environment _K	0.486	0.138	0.251	3.517	.001	0.211	0.761	0.165	6.073
a. Dependent Variable: Performance_GP									

Table 3. Results of ANOVA Analysis for the Influence of Work Environment, Competence, and Supervision on the Performance of Assistant Teachers

ANOVA[a]						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	1410.182	3	470.061	370.943	.000[b]
	Residual	98.842	78	1.267		
	Total	**1509.024**	**81**			
a. Dependent Variable: Performance_GP						
b. Predictors: (Constant), Environment _K, Competent _K, Supervision _K						

Heteroscedasticity Test

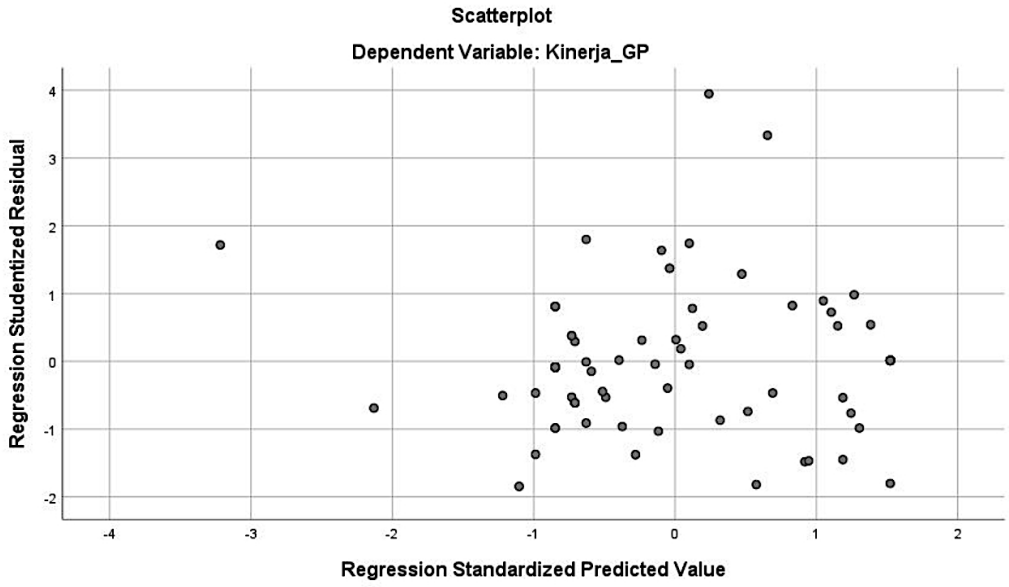

Figure 2. Scatterplot of Residuals Against Standardized Prediction Values for the Companion Teacher Performance Variable

With the distribution of data in the figure above, the data is distributed around the zero point on the X and Y axes without forming a specific pattern, such as zigzagging or clustering, indicating that heteroscedasticity symptoms are not detected.

Thus, all tests on classical assumptions are met, so researchers can continue further statistical tests, namely the t-test, F-test, and determine the coefficient of determination of the resulting regression equation.

Multiple Linear Regression Analysis Results

After going through the classic assumption test above, the t-test, F-test, and determining the coefficient of determination of the resulting regression equation are carried out. Based on the results of data processing with SPSS Ver.26, the following results were obtained:

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Table 4. ANOVA Test Results on Performance_GP Variable

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	1410.182	3	470.061	370.943	.000[b]
	Residual	98.842	78	1.267		
	Total	**1509.024**	**81**			
a. Dependent Variable: Performance_GP						
b. Predictors: (Constant), Environment _K, Competent _K, Supervision _K						

Table 5. Results of Regression Coefficient Test on GP Performance Variables

Coefficientsa									
Model	**Ustd Coef**		**Std Coef**			**95% Confidence Interval for B**		**Collinearity Statistics**	
	B	**Std. Error**	**Beta**	**t**	**Sig.**	**Lower Bound**	**Upper Bound**	**Tolerance**	**Vif**
(Constant)	0.541	1.301	-	0.416	0.679	-2.048	3.130	-	-
Supervision _K	0.912	0.158	0.460	5.782	0.000	0.598	1.226	0.133	7.545
Competent G	0.580	0.142	0.289	4.099	0.000	0.298	0.862	0.168	5.938
Environment _K	0.486	0.138	0.251	3.517	0.001	0.211	0.761	0.165	6.073
a. Dependent Variable: Performance GP									

Table 6. Table of Variables Included and Excluded in the Regression Model

Variables Entered/ Removed[a]			
Model	**Variables Entered**	**Variables Removed**	**Method**
1	Environment _K, Competent _K, Supervision _K	.	Enter
a. Dependent variable Performance_GP			
b. All Requested variables entered			

Tbale 7. Multiple Regression Summary Model on the Performance Variable of Assistant Teachers

Model Summary[b]										
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**R Square Change**	**F Change**	**df1**	**df2**	**Sig. F Change**	**Durbin-Watson**
1	.967[a]	.934	.932	1.12570	.934	370.943	3	78	.000	1.749
a. *Predictors*: (Constant), Environment K, Competent K, Supervision K										
b. *Dependent Variable*: Performance_GP										

Regression Model:

Y = 0.541 + 0.912X1 + 0.580X2 + 0.486X3 + e

X1 = Principal Academic Supervision, the coefficient is 0.912, meaning: If academic supervision increases by 1 unit, then the capacity of the driving teacher will increase by 0.912 units, assuming other variables remain. $X_{(2)}$= Competence of the Driving Teacher, the coefficient is 0.580, meaning: If the competence of the driving teacher increases by 1 unit, then its performance increases by 0.580 units, assuming other variables remain. X_3 = Work Environment, the coefficient is 0.486, meaning: If the training experience increases by 1 unit, then the capacity of the driving teacher increases by 0.486 units, assuming other variables remain constant. Constant

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0.541 or Intercept, meaning: If all X variables (X1, X2, and X3) are zero, then the base value (prediction) of the capacity of the driving teacher is 0.541. In practice, however, a zero value on these three variables may not be realistic, so this constant is more mathematically useful than practically. Coefficient of Determination (R^2): 0.934 (93.4% of the variation in the capacity of the driving teacher can be explained by the three independent variables (Principal's Academic Supervision, Driving Teacher Competence, and Working Environment). While the rest, namely (1- 93.4% or 6.6%, is determined by other variables not examined in this study.

F test: F = 0.000 < 0.05 (model is significant simultaneously). T test (partial): Principal's Academic Supervision (X1): t = 0.000 < 0.05, Competence (X2): t = 0.000 < 0.05, Working Environment (X3): t = 0.001, p < 0.05.

The empirical evidence presented in this study is very insightful in terms of supporting the argument that the concept of teacher capacity, especially among mobilizing teachers (Guru Penggerak) cannot be considered an independent construct, but instead, it is a product of the deep-seated web of systemic, institutional and relational factors. The hypothesis about the explanatory power of principal academic supervision, teacher competence, and work environment being not only a background variable, but a structural architecture, on the basis of which teacher professionalism and educational leadership are built and implemented, is confirmed by the good explanatory power of the model (R 2 = 0.934). Nevertheless, the statistic validity of this finding is complemented by the fact that there might be reasonable doubts cast against the dynamics, mechanisms, and assumed principles of teacher development and institutional performance.

The importance of major academic guidance, which is the most powerful predictor (the value of 0.912), once more repeats a very old teaching leadership convention: school principals are not only administrative gatekeepers, but also essential pedagogical leaders (Williams et al., 2023; Liu & Liao, 2025). However, unlike most western-biased approaches to instructional leadership, in Indonesia, this position is frequently confused with regulatory responsibilities, resource limitations as well as affinity towards vertical power structures. This research demonstrates the importance of the fact that effective supervision is not the matter of following the checklist, but it involves principals participating in dialogic, formative, and reciprocal processes of supervision that make teachers not the objects of surveillance, but rather the agents of growth. Trust together with the professional discourse and context sensitivity is, according to Sennun et al. (2006), the foundation of the capacity building supervision.

Nonetheless, this monitoring is not a practice on all levels. According to the works by Haris et al. (2018), at most Indonesian schools, the process of academic supervision is found to be very procedural and evaluative in nature, more than a process of continuous collaboration. Through this disjunction, it is clear that policy endorsement of academic supervision (e.g. Permendiknas No.13/2007) represents a necessary combination of leadership training that redefines supervision as a concept to a redesign of the sense of inspection as design and cognition (reading) of pedagogical excellence. In this aspect, our work contributes to the reform rational that the principal preparation is considerate of focusing on the instructional leadership skills, more so in the building of teacher leadership cultures (Hayes & Irby, 2020; Shaked et al., 2021; Leithwood, 2021).

Teacher competence effect (0.580) supports the principle statement that teaching is a knowledge-intensive discipline, and pedagogical, subject-area, and dispositional knowledge should be renewed on an ongoing basis (Gutstein, 2008). In Guru Penggerak program context, the teacher competence extends beyond technicalities; where moral and intellectual duty of leading change in pedagogy in the school where one teaches. Teacher mobilizing are not just

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good teachers they are institutional agents of change and empowerment and participants in the education reform environment. Competence thus has to be seen as not being unidimensional but rather as being multidimensional that includes the concepts such as finesse regarding pedagogy, sensitivity in terms of ethics, emotional intelligence and political literacy (Alexandrovich & Alexandrovich, 2021; Zhang & Tian, 2024).

However, this study is also a call to be cautious in being too individualistic in defining competence. Chen (2022) believe that individual knowledge is not the only source of professional competence but also through situated learning and inquiry within community of practice. The teacher competence as an individual predictor given by us is highlighted but what they also question, implicitly, is a structural issue, viz., are there the requisite organizational circumstances of collaborative knowledge construction prevailing in the schools of Tangerang City? Unless accompanying cultures of critical reflection and peer-to-peer mentoring are built in, competence can end as a performative standard, as opposed to an embodied, developing ability.

The fact that the work environment is a significant predictor ($\beta = 0.486$) reinforces the ecological perspective of teacher performance according to which the climate of schools, collegiality, and trust in leadership, and the material conditions co-constitute the emotional and professional sustainability of teachers (Wessels et al., 2024; Trowler, 2019). This is also especially true in Indonesia where lack of equality in school systems, bureaucratic procedures, and working pressure tend to sabotage well-meaning policy changes. Our results are in agreement with those of other researchers (Tasiouli & Lyra, 2024; Athanasios, 2024) who argued that the psychosocial climate of a school, characterized by trust, mutual respect, and shared leadership, can both improve the quality of instruction and positively affect the resilience of teachers and their motivation levels.

Importantly, the result raises doubts on input-driven assumptions of several performance-based accountability systems that tend to seclude teacher performance with regards to location. Sustainability teacher effectiveness is highly relational and contextual as observed by Nawab & Bissaker (2021). In fact teacher leaders specifically bloom not in governed rigidity of the scenarios, but instead in innovative, autonomous, and collaborative professional ecologies. Thus an intervention in supporting mobilizing teacher capacity cannot be genuine unless it entails structural investments as far as reforming work environment is concerned--not infrastructure but culture of work.

The combined impact of those three variables refers to a systems-thinking approach to educational change. In theory of educational reform of Liehr & Hauff (2022), we contend that teacher capacity should not be considered as a result of specific input but a matter of dynamic combination among the variables of leadership, competence and organisational climate. The large R 2 value experienced in this study demonstrates the fact that under such conditions of synergetic alignment of these components, successful teacher leadership may emerge. Nevertheless, it is not automatic alignment, and the coherence must be planned at the policy, school leadership, and professional development systems levels (Cassata & Allensworth, 2021; Mincu, 2022).

There are however very important questions that arise. What to do with the remaining 6.6 per cent of unexplained variance? Although statistical modelling is by definition reductionist, this unexplained variation can reflect invisible but potent forces: beliefs and identities among the teaching (Von Vacano et al., 2022), societal cultural norms as well as macro-political forces. In addition, the quantitative approach that this research will take, though this has merits in terms of predictive accuracy, it does contribute to distorting the lived realities of teacher

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leadership, how it is negotiated, challenged or redefined on the ground. It would be advisable that future studies use mixed-methods or ethnographic methods to bring up such subtle realities to give a deeper understand of teacher capacity as a socially constructed concept.

And finally, there is an opportunity to reflect on such program as Guru Penggerak. Although it gives high aspirations about developing leadership of teachers it neglects to understand that its effectiveness depends not merely on who is chosen and trained but also how schools can be redesigned so that teacher leadership can be practiced and nurtured. Unless Tanentzap harsh psyche_69 coherence exists among practices related to supervision, techniques of developing competence and enabling environment, teacher mobilization will be rather ahetic than real. Thus, part of the context in which the mobilizing teachers operate has to be addressed: it is not so much who this teacher is, but what school they will be expected to transform, and what the system is structurally able to do to enable transformation.

Conclusion

Within the scope of this research, the authors have empirically substantiated that the ability to assemble teachers (Guru Penggerak) in the elementary school in the City of Tangerang is notably predetermined by three interconnected variables, namely, the principal academic control, teacher competence, and the working environment. All of these variables alone capture a staggering 93.4 percent of the variability in teacher capacity, which suggests that more integrated approaches to teacher development, involving leadership, professional learning and institutional support are clearly necessary beyond taking fragmented approaches one variable at a time.

These results confirm the importance of the position of the principals as instructional leaders rather than administrative supervisors. Academic supervision is pedagogically founded, and practiced with relational integrity, the potential capability is to raise teaching standards and induce job development. This point creates the dire necessity of the promotion of leadership development initiatives, which will enable the principals to possess the instruments to pursue the development of formative, collaborative, and context-relevant supervision. Likewise, teacher competence can be determined as one of the foundations of professional capacity that includes not only the ability to master the content and methods of teaching, but also its ethical and philosophical aspects. The competence, however, is not individual and unchangeable; it is developed in the process of learning that is constant and collaborative in the welcoming school cultures. This requires an institutional commitment to sustained professional learning which is place-based and dialogic.

It causes us to take notice as well of the importance of a favorable work surrounding as a teacher maintenance. Collegiality and trust in leadership, proper infrastructure, professional respect as a culture are not secondary but the primary focus of teacher motivation and leadership. A teacher may be very competent but his or her capacity will be crippled by a dysfunctional or unconstructive institutional climate. In combination, the findings contradict simplistic decontextualized views of teacher performance. They are demanding an extension in the use of isolated interventions to a greater use of holistic models of educational change, which acknowledges that teacher leadership can thrive only when it is cultivated through visionary supervision, empowered of the congruence of competence and supported by an enabling environment. The Guru Penggerak program in such a sense should not merely determine and develop prospective leaders in the teaching field but also lead to the re-organization of the organizational environment within which such leaders teach into such an environment that will favor the work of these leaders.

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However, this study is not without limitations. Its exclusive use of quantitative methods, while yielding predictive clarity, restricts the exploration of deeper experiential, emotional, and cultural dimensions of teacher leadership. Future research should incorporate qualitative or mixed-methods approaches to capture the complexities and contradictions of capacity-building in diverse educational settings.

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