



The Relationship between Teacher Collaboration and Work Environment on Work Comfort

Putri Zakia Agustin¹, Rubini², Siti Marpuah³

^{1,2}STAI Terpadu, Yogyakarta, ³Universiti tun Hussein Onn Malaysia

putrizakiaagustin4@gmail.com

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ABSTRACT

This study aims to examine the relationships among teacher collaboration, the work environment, and job comfort. A quantitative research approach was employed, using a saturated sampling technique in which the entire population served as the research sample, given its relatively small size. The participants of this study were 30 teachers at SMP Negeri 1 Sagalaherang, Subang City. Data were collected using a Likert-scale questionnaire designed to measure the levels of teacher collaboration, work environment conditions, and job comfort. The collected data were analysed using multiple linear regression in SPSS version 27. The analysis indicates that teacher collaboration has a significant positive effect on job comfort, suggesting that effective cooperation, communication, and teamwork among teachers contribute to a more comfortable work environment. In addition, the work environment was found to be significantly related to job comfort, suggesting that physical, social, and psychological working conditions play an important role in supporting teachers' well being. Simultaneously, teacher collaboration and the work environment were proven to have a significant combined effect on job comfort. These findings highlight the importance of fostering collaborative practices and creating a supportive work environment to enhance teachers' job comfort and overall performance in educational institutions.

INTRODUCTION

Education is widely recognised as a cornerstone of national progress, and Indonesia, as a developing country, continues to strive for advancement, particularly in the education sector. In theory, education serves as a fundamental driver of the production of skilled, intelligent, and competitive human resources who can contribute meaningfully to national development (Mariyono, 2024; Nwachukwu, 2024). This ideal is clearly articulated in Article 1 of Law No. 20 of 2003 on the National Education System (UU Sisdiknas, 2003), which states that education is a conscious and planned effort to create a learning atmosphere and learning process that enable students to actively develop their potential, including spiritual and religious strength, self-control, personality, intelligence, and the skills needed by individuals, society, the nation, and the state. Furthermore, the objectives of national education emphasise the development of individuals who are faithful, noble in character, capable, creative, independent, and responsible democratic citizens (Abang Muis et al., 2024; Barker, 2024; Hakim, 2023). However, the reality in many educational settings reveals a gap between

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these normative expectations and actual practice, where the quality of learning environments and educational outcomes has not always reflected these ideals. This discrepancy raises critical questions about how educational goals are implemented in everyday school contexts and why the expected quality of education has not been fully realised (Li, 2022; Waltzer et al., 2023; Zweeris et al., 2023). Teachers, who are positioned as strategic actors in achieving quality education, are legally defined in Article 1 of Law No. 14 of 2005 (UU RI, 2005) as professional educators with core responsibilities that include educating, teaching, guiding, directing, training, assessing, and evaluating learners at early childhood, basic, and secondary education levels within formal education pathways. In principle, teachers are expected to master four core competencies: pedagogical, personal, social, and professional. Yet in practice, not all learning environments effectively reflect these professional standards, and many teachers still face structural, organisational, and environmental challenges that hinder the creation of a truly conducive and engaging learning environment (Archambault et al., 2022; McChesney & Cross, 2023; Singun, 2025). This gap between policy ideals and everyday realities is a crucial social issue that warrants closer academic attention, particularly for understanding how educational quality is shaped and experienced in real school contexts.

Prior studies indicate that educational success is shaped not only by students' academic achievement but also by teachers' professional performance (Alwaely et al., 2023; López-Martín et al., 2023; Nunes et al., 2023). Teacher collaboration and collegiality are recognised as key determinants of teachers' professional development and overall school development, as noted by (Kelchtermans, 2006). Teachers' professionalism is reflected in their ability to employ appropriate instructional strategies and learning media to enhance educational quality. Technology enhanced media are reported to increase learning motivation, attract students' attention, simplify complex concepts, and render abstract ideas more concrete, as discussed by (Muslih, 2016). Teacher collaboration is understood as coordinated collective work oriented toward shared goals through integrated task alignment, as described by (Muhammad Abdus Salam, 2017), and as a partnership strategy aimed at achieving mutual benefits based on principles of mutual need and mutual growth, as articulated by (Moh Jafar Hafsa, 1999). The work environment influences teachers' job comfort through physical and non-physical dimensions, including relationships with superiors, colleagues, and subordinates, as explained by (Sedarmayanti, 2011). Job comfort is shaped by enjoyable work activities, managerial support, and socialisation with colleagues, as outlined by (Michel et al., 2019). These findings suggest that teacher collaboration and the work environment are central factors in shaping teachers' job comfort and therefore warrant integrated examination within the school context.

This study seeks to understand the relationship between teacher collaboration and teachers' job comfort in everyday school practice and to examine how the work environment contributes to the formation of a sense of comfort in carrying out professional duties. The study also aims to explore how these two factors interact in building a supportive, comfortable, and productive working climate for teachers. By providing a more comprehensive portrayal of patterns of collaboration among teachers, the forms of support experienced in daily work, and the workplace conditions encountered in routine practice, the study expects to generate a deeper understanding of the factors that shape teachers' job comfort. This understanding is intended to inform strategies for strengthening collaborative practices and improving school work environments in a more sustainable manner. In turn, efforts to enhance teachers' job comfort can be guided in a more planned and context sensitive way to support teacher motivation, performance, and the continuity of high-quality teaching practices.

Building on gaps between educational ideals and school realities, as well as the practical challenges teachers face in daily practice, this study assumes that teachers' job comfort is shaped not only by individual factors but also by the quality of collaboration and the conditions of the work environment. The persistence of role gaps between senior and junior teachers, the emergence of exclusive social groups that trigger social jealousy, unequal task distribution related to digitalisation demands, and limited workplace facilities indicate that weak collaboration and an unsupportive work environment can reduce teachers' sense of comfort at work. Conversely, effective collaboration and a conducive work environment are likely to foster a more positive, balanced, and supportive working experience for teachers. On this basis, the study proposes the following hypotheses: H_1 , there is a relationship between teacher collaboration and job comfort in schools. H_2 , there is a relationship between the work environment and job comfort in schools. H_3 , there is a simultaneous relationship between teacher collaboration and the work environment on job comfort in schools. These arguments provide the conceptual foundation for examining how relational and environmental factors jointly shape teachers' job comfort in the school context.

RESEARCH METHODS

This study was conducted at Sagalaherang 1 State Junior High School in Subang Regency, focusing on the school as an institutional setting, the characteristics of the work environment, teachers' collaborative practices, and the dynamics of everyday instructional activities. A quantitative survey design was employed to examine the effects of teacher collaboration and the work environment on teachers' job comfort, in line with the objective, numerical orientation of quantitative inquiry (Creswell, 2013). Information was obtained from teacher respondents and supported by relevant institutional texts and documents related to school human resource management. Data collection involved desk review of school records, limited observation to complement questionnaire data as a field data collection technique (Hardani, 2020), and the administration of a five-point Likert-scale questionnaire to all teachers using saturated sampling due to the relatively small population size, with the questionnaire serving as the primary measurement instrument (Sekaran & Bougie, 2016), while documentation was utilized to examine institutional archives and records as supporting data sources (Rizky Tanjung et al., 2022). The collected data were analysed through the stages of data reduction, data display, and data verification to ensure the consistency of findings, applying inferential statistical techniques in the form of multiple linear regression to test relationships among variables, complemented by tests of validity and reliability, normality, multicollinearity, and heteroscedasticity, as well as tests, F-tests, and coefficients of determination. Statistical software was used to ensure computational accuracy and analytical transparency throughout the analytical process.

RESULTS AND DISCUSSION

Result

This research aims to examine the relationship between teacher collaboration and the work environment on job comfort, utilising a quantitative survey method. Although the total employee population was 55, data was collected from only 30 respondents. The sampling technique employed was saturated sampling, in which the entire population is used as the sample because the population is relatively small. This occurred because some respondents were absent during the distribution of the questionnaire.

Validity Test

This test aims to evaluate the validity of each questionnaire statement to ensure the accuracy of the data obtained. A questionnaire is deemed valid if the calculated correlation (r_{hitung}) is greater than its table correlation value (r_{tabel}), i.e., $r_{hitung} > r_{tabel}$. Conversely, an instrument is considered invalid, indicated by a low validity level, meaning that the calculated correlation value (r_{hitung}) is less than its table correlation value (r_{tabel}), i.e., $r_{hitung} < r_{tabel}$.

Table 1.
Validity Test Results

Variable	Item	R-Count	R-Table	Description
Teacher Collaboration (X ₁)	X _{1.1}	0.471	0.361	Valid
	X _{1.2}	0.787	0.361	Valid
	X _{1.3}	0.514	0.361	Valid
	X _{1.4}	0.757	0.361	Valid
	X _{1.5}	0.837	0.361	Valid
	X _{1.6}	0.514	0.361	Valid
	X _{1.7}	0.773	0.361	Valid
	X _{1.8}	0.562	0.361	Valid
	X _{1.9}	0.684	0.361	Valid
	X _{1.10}	0.729	0.361	Valid
Work Environment (X ₂)	X₂			
	X _{2.1}	0.798	0.361	Valid
	X _{2.2}	0.686	0.361	Valid
	X _{2.3}	0.518	0.361	Valid
	X _{2.4}	0.718	0.361	Valid
	X _{2.5}	0.661	0.361	Valid
	X _{2.6}	0.736	0.361	Valid
	X _{2.7}	0.561	0.361	Valid
	X _{2.8}	0.760	0.361	Valid
	X _{2.9}	0.694	0.361	Valid
Job Satisfaction (Y)	X _{2.10}	0.738	0.361	Valid
	Y			
	Y _{1.1}	0.616	0.361	Valid
	Y _{1.2}	0.653	0.361	Valid
	Y _{1.3}	0.588	0.361	Valid
	Y _{1.4}	0.671	0.361	Valid
	Y _{1.5}	0.818	0.361	Valid
	Y _{1.6}	0.739	0.361	Valid
	Y _{1.7}	0.830	0.361	Valid
	Y _{1.8}	0.818	0.361	Valid
	Y _{1.9}	0.808	0.361	Valid
	Y _{1.10}	0.798	0.361	Valid

Based on the table, it is evident that the independent variables (teacher collaboration and work environment) and the dependent variable (job comfort) all exhibit significant correlation coefficients, exceeding the r-table value of 0.361. Therefore, it can be concluded that all variables in this study are valid and yield consistent results.

Reliability Test

Reliability testing is a statistical tool used to indicate the extent to which an instrument provides consistent measurement results when repeated measurements are conducted. Reliability is assessed using Cronbach's alpha. The test is considered reliable when the Cronbach's Alpha value is greater than 0.7.

Table 2.

Reliability Test Results

Variable	Cronbach's Alpha	Description
Teacher Collaboration (X ₁)	0.850	Reliable
Work Environment (X ₂)	0.834	Reliable
Job Comfort (Y)	0.885	Reliable

Based on the test results, the instrument is reliable, with Cronbach's Alpha values for each variable exceeding 0.7. Thus, it can be concluded that all variables in the questionnaire are declared reliable and can therefore be used for further research analysis.

Normality Test

This test is conducted to determine whether the independent and dependent variables are normally distributed. The test is used to determine whether the collected data exhibit a normal distribution or whether they originate from a normally distributed population. (Fahmeyzan et al., 2018).

Table 3.

Normality Test Results

Normal Parameters ^{a,b}	Mean	0
	Std. Deviation	1
Most Extreme Differences	Absolute	.228
	Positive	.153
	Negative	-.228
Kolmogorov-Smirnov Z		1.247
Asymp. Sig. (2-tailed)		.089
Monte Carlo Sig. (2-tailed)	Sig.	.080 ^c
99% Confidence Interval	Lower Bound	.073
	Upper Bound	.086

a. Test distribution is Normal.

b. User-Specified

c. Based on 10000 sampled tables with starting seed 2000000.

Based on the conducted test results, the Asymp.Sig. (2-tailed) value is 0.089, which is greater than 0.05. Thus, the data are normally distributed.

Multicollinearity Test

This test is used to determine whether there is a correlation among independent variables in the regression model. (ghozali, 2017). If there is no correlation between the variables, then the regression model is considered a good regression model.

- 1) When the tolerance value is > 0.10 and the VIF value is < 10 , it is concluded that there are no signs of multicollinearity.
- 2) When the tolerance value is ≤ 0.10 and the VIF value is ≥ 10 , it is concluded that there are symptoms of multicollinearity. (Sriningsih *et al.*, 2018).

Table 4.
Multicollinearity Test Result

		Coefficients ^a		Collinearity Statistics	
		Tolerance		VIF	
1	Model				
	Teacher Collaboration	.400		2.500	
	Work Environment	.400		2.500	

a. Dependent Variable: Job Comfort

Based on the aforementioned table test, each regression variable has a VIF value < 10 and a tolerance value > 0.10 . Therefore, it can be concluded that there is no multicollinearity.

Heteroscedasticity Test

This test is used to determine whether there is a difference in variance across residual observations within the regression model (ghozali 2017). Therefore, if all independent variables do not have a significant effect on the absolute residual values, or if their significance value (Sig) is > 0.05 .

Table 5.
Heteroscedasticity Test Result

Model	B	Unstandardized Coefficients		Standardized Coefficients	
		Std.	Error	Beta	t
(Constant)	-.272		2.635		-.103
Teacher Collaboration	.169		.088	.538	1.930
Work Environment	-.147		.065	-.630	-2.258

a. Dependent Variable: Abs_RES

The following table indicates that each variable above has a Sig. value. Teacher collaboration has a value of 0.064, and the work environment has a value of 0.032. Therefore, the Sig. values of 0.064 and 0.032 are > 0.05 . Thus, it can be concluded that there are no symptoms of heteroscedasticity.

Multiple Linear Regression Analysis Test

Multiple linear regression is a statistical analysis method used to determine a model of the relationship between a dependent variable (Y) and multiple independent variables (X), thereby creating a linear model (Fahlepi & Widjaja, 2019; Saputra, Wakhinuddin, & Rizal, 2019). The conclusions from the multiple linear regression analysis are as follows:

Table 6.*Multiple Linear Regression Analysis Test Results*

Model	Coefficients ^a			t	Sig.
	B	Std. Error	Standardized Coefficients Beta		
(Constant)	16.834	2.631		6.398	.000
Teacher Collaboration	-.491	.087	-.409	-5.612	.000
Work Environment	1.148	.066	1.259	17.279	.000

Dependent Variable: Job Comfort

Based on Table 6 above, the regression model obtained is:

$$Y = -5.612X_1 + 17.279X_2 + e$$

Based on these tests, the negative correlation between the teacher collaboration variable (X_1) and job comfort (Y) has a coefficient of -0.409. This indicates that variable X has an inverse relationship with the job comfort variable (Y). Thus, when the value of X increases, the value of variable Y will decrease by 0.491, or vice versa.

This finding can be attributed to several factors that render teacher collaboration ineffective, consequently impacting job comfort. Unhealthy working conditions, such as role disparities between senior and junior teachers, the overemphasis on certain social groups, and workload, particularly digitalisation tasks assigned to junior staff, can lead teachers to prefer working independently rather than engaging in extensive collaboration. This aligns with the findings presented by [XuDong Liu and DaYu Huang. \(2025\)](#) *"In our setting, collaboration feels like an afterthought. Without support or encouragement from the administration, it's hard to prioritise teamwork amidst everything else."* The quote states that "in our workplace, collaboration is not considered important. Without support or encouragement from the school or leadership, it's difficult to prioritise collaboration because there are many other tasks that need to be done."

Meanwhile, the positive correlation between the work environment (X_2) and job comfort (Y) has a coefficient of 1.259. Thus, an increase in the work environment variable (X_2) will be followed by an increase in the job comfort variable (Y), and vice versa. Therefore, an effective work environment can be one of the factors that strengthen teacher comfort in the workplace.

Partial Test (t-test)

The purpose of this test is to determine whether the independent variable (X) influences the dependent variable (Y). The partial test process involves ensuring that the significance value (Sig.) is less than 0.05. For a positive calculated t-value, the calculated t-value must be greater than the table t-value (2.051); however, for a negative calculated t-value, the negative calculated t-value must be less than the negative table t-value (-2.051). Thus, this indicates an influence of variable X on variable Y. This research uses SPSS version 27 software. Here are the results of the test:

Table 7.
Partial Test Result (t-test)

Independent Variable	Calculated t-value	Significance (p-value)	Remark
Teacher Collaboration	-5.612	0.000	Negative and significant
Work Environment	17.279	0.000	Positive and significant

Based on the table above, the negative t-calculated value indicates that the significance value is < 0.05 , with a t-calculated value less than the t-table value of -2.051 for the independent variable teacher collaboration. Meanwhile, for the positive t-calculated value, the significance value is < 0.05 , and the t-calculated value is greater than 2.051 for the independent variable work environment (X_2). Thus, this indicates that, to some extent, both variables have a significant, positive relationship with job comfort (Y).

Uji F

This test is conducted to verify the significance of the equation that determines the level of impact of the independent variable on the dependent variable simultaneously. The following are the test results:

Tabel 8.
F-Test Results

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	362.183	2	181.091	230.812	.000 ^b
Residual	21.184	27	.785		
Total	383.367	29			

a. Dependent Variable: Job Comfort

b. Predictors: (Constant), Work Environment, Teacher Collaboration

The table indicates that the variables teacher collaboration (X_1) and work environment (X_2) simultaneously demonstrate a significant relationship with job comfort (Y). This is evident from the significance value of 0.000, which is less than 0.05, and an F-calculated value of 230.812, which is greater than 3.34. Consequently, it can be concluded that teacher collaboration (X_1) and the work environment (X_2) are simultaneously significantly related to job comfort (Y).

Coefficient of Determination Test (R^2)

This test is conducted to measure the regression model obtained from the research data, as follows:

Table 9.
Coefficient of Determination Test (R^2) Result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.972 ^a	.945	.941	.886

a. Predictors: (Constant), Work Environment, Teacher Collaboration

b. Dependent Variabel: Job Comfort

Based on the table, the R-square value is 0.941 (94.1%), indicating that the dependent variable, job comfort in schools, is explained by the independent variables, namely teacher collaboration (X_1) and work environment (X_2). The remaining 5.9% is explained by other variables.

Discussion

Relationship of Teacher Collaboration to Job Comfort

Based on the research findings, the teacher collaboration variable shows a positive and significant relationship with job comfort. Therefore, H_1 is accepted, indicating that teacher collaboration has a positive and significant relationship with job comfort at Sagalaherang 1 State Junior High School (SMP) in Subang City. Based on respondents' descriptive responses, the highest average score, 4.93, was obtained for the statement "collaboration among teachers improves the quality of learning in schools." This indicates that effective collaboration among teachers makes the classroom learning process more effective, innovative, and creative, and enhances the quality of students' learning experiences and achievement of predetermined goals. This aligns with [Arikunto \(1995\)](#) who states that collaboration can benefit an organisation and positively influence its members, and that it can enhance productivity compared to working individually. However, the average score is 4.60 for the statement "I understand and agree with the objectives of teacher collaboration in school." Some teachers do not yet clearly understand the goals and benefits of such collaboration, due to ineffective communication among teachers, stemming from several factors: differences in roles between senior and junior teachers, where senior teachers are more dominant in decision-making during school activities, leading junior teachers to feel less involved; and the existence of certain friendship groups among teachers, causing some teachers to only interact and collaborate within their own friendship group. This results in social jealousy among teachers.

Relationship of Work Environment to Job Comfort

Based on the research findings, the work environment variable shows a positive and significant relationship with job comfort. Therefore, it is stated that X_2 is accepted, indicating that the work environment has a significant positive relationship with job comfort at Sagalaherang 1 State Junior High School (SMP) in Subang City. Based on respondents' descriptive responses, the highest average value, 4.87, was found for the statement "The lighting and air in the workspace make me feel comfortable working." Some teachers stated that the school's work environment has good lighting and air circulation, which they value. This research aligns with the views of [Elly & Soraya \(2020\)](#), who state that teachers are enthusiastic about working in a comfortable, supportive school environment. Furthermore, [Vischer \(1996\)](#) states that if employees are pleased with their work environment, they will feel comfortable performing their activities and completing their tasks. However, the average score is also low at 4.23 for the statement "I do not feel burdened by excessive work pressure." Some teachers feel overwhelmed by an uneven distribution of tasks, a situation exacerbated by an insufficient number of available teachers. Consequently, tasks are not distributed equitably.

CONCLUSIONS

The key finding of this study is that teacher collaboration and the quality of the work environment play pivotal roles in shaping teachers' job comfort, indicating that strengthening

professional relationships and cultivating a healthy workplace climate are central to improving well being at school. In terms of scholarly contribution, this article enriches the empirical discourse on how collaborative practices and workplace conditions relate to teachers' job comfort through a survey based quantitative approach, while reaffirming the importance of school human resource management in fostering a supportive work climate. Notwithstanding these contributions, the study is limited by its focus on a single school context, a relatively small number of respondents, and a cross-sectional survey design, which may not fully capture variations across institutional settings, respondent characteristics, or changes over time.

Future research is therefore encouraged to involve more diverse school contexts, broaden respondent profiles, and integrate survey methods with qualitative or longitudinal approaches to generate more comprehensive evidence that can better inform targeted and context-sensitive school policies.

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