

The Influence of Work Motivation and Principal Leadership on the Performance of Private High School Teachers in Medan Petisah District through Job Satisfaction as an Intervening Variable

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Abstract.

This study aims to analyze the influence of work motivation and principal leadership on teacher performance through job satisfaction as an intervening variable among private senior high school teachers in Medan Petisah District, Indonesia. This study used a quantitative explanatory approach. The population consisted of 217 educators and education personnel from seven active private senior high schools, and 198 valid responses were obtained through questionnaire distribution. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the measurement model, structural model, direct effects, and indirect effects. The findings show that work motivation does not significantly affect job satisfaction, and principal leadership also does not significantly affect job satisfaction. However, job satisfaction has a positive and significant effect on teacher performance. Work motivation and principal leadership also have positive and significant direct effects on teacher performance. Principal leadership is the strongest predictor of teacher performance, followed by job satisfaction and work motivation. The indirect effects of work motivation and principal leadership on teacher performance through job satisfaction are not significant, indicating that job satisfaction does not mediate these relationships. The study concludes that teacher performance in private senior high schools is influenced more strongly by direct factors, particularly principal leadership, work motivation, and job satisfaction, rather than by an indirect mediation mechanism. This study is limited to private senior high schools in one district and uses cross-sectional self-reported data. This study contributes to educational management literature by showing that job satisfaction functions as a direct predictor of teacher performance, not as an intervening variable in this model.

Keywords: *Work Motivation; Principal Leadership; Job Satisfaction; Teacher Performanc and PLS-SEM.*

I. INTRODUCTION

The quality of education remains a strategic issue in Indonesia's human resource development, particularly because student learning outcomes are not fully aligned with the length of schooling they have completed. A World Bank report shows that although Indonesian students complete an average of 12.4 years of education, their learning outcomes are equivalent to approximately 7.8 years of effective learning, creating a gap between educational access and the quality of learning outcomes [1]. This situation is also reflected in the results of the 2022 PISA survey, where only 18% of Indonesian students achieved at least Level 2 in mathematics, 25% in reading, and 34% in science, far below the OECD average [2]. These data demonstrate that improving the quality of education is not sufficient simply through expanding access but also needs to be directed at improving the quality of the learning process in schools. In this context, teacher performance is a key factor because teachers play a direct role in planning, implementing, evaluating, and improving the learning process in the classroom.

Teacher performance in today's education era is measured not only by their ability to deliver material, but also by their readiness to adapt to the Independent Curriculum, the use of learning technology, classroom management, strengthening student character, and the ability to create learning that is relevant to 21st-century needs. The OECD (2023) noted that in the Indonesian context, 57% of students reported that teachers showed concern for student learning in most mathematics lessons, while 64% stated that teachers provided additional assistance when students needed it. However, PISA also revealed challenges in the learning climate, such as students being distracted by digital devices and less conducive classroom conditions. This phenomenon confirms that teacher performance does not stand alone but is influenced by

psychological and school organizational factors. Two highly relevant factors to study are teacher work motivation and principal leadership, as both are directly related to teacher morale, engagement, discipline, sense of responsibility, and satisfaction in carrying out their professional duties.

Contextually, this research is important to conduct on private high schools in Medan Petisah District because private schools have relatively different management characteristics compared to public schools, especially in aspects of foundation governance, school leadership, demands for educational services, inter-school competition, and parental expectations regarding learning quality. BPS data shows that in the 2024/2025 academic year, North Sumatra had 1,075 high schools, consisting of 438 public high schools and 637 private high schools, with a total of 24,662 high school teachers, including 8,117 teachers in private high schools, and a total of 394,193 high school students [3]. Reference data from the Ministry of Education and Culture also shows that Medan Petisah District has several secondary education units, including several private high schools spread across the Petisah Tengah, Sei Sikambang D, Sei Putih Barat, and Sekip sub-districts. This fact shows that private high schools have an important role in the provision of secondary education services in Medan City. Therefore, examining the factors that influence the performance of private high school teachers in this region is relevant, especially to understand how work motivation and principal leadership can improve teacher performance through job satisfaction.

Theoretically, work motivation describes the internal and external drives that encourage teachers to work optimally, while principal leadership reflects the principal's ability to direct, influence, support, and build a conducive work climate for teachers. Job satisfaction is an important variable because teachers who are satisfied with their work, work relationships, rewards, leadership support, and the school environment tend to show better performance. The results of Juhji et al.'s (2022) meta-analysis showed a significant relationship between principal leadership and teacher job satisfaction, with an effect size in the medium category [4]. A study by Masdianah et al. (2023) also found that job satisfaction can act as a mediator in the relationship between principal leadership style and teacher performance [5]. In addition, Rudiatna et al. (2025) showed that principal leadership has a positive effect on job satisfaction, and job satisfaction in turn has a positive effect on teacher performance [6]. However, most previous research has been conducted in the context of madrasas, elementary schools, public schools, or vocational schools, while studies that specifically place job satisfaction as an intervening variable between work motivation, principal leadership, and teacher performance in private high schools in Medan Petisah District are still relatively limited.

Based on this background, this study aims to analyze the influence of work motivation and principal leadership on the performance of private high school teachers in Medan Petisah District through job satisfaction as an intervening variable. This study is expected to provide a theoretical contribution by strengthening the model of educational organizational behavior that explains that teacher performance is not only directly influenced by motivation and leadership, but also through psychological conditions in the form of job satisfaction. From a methodological perspective, the use of SEM-PLS allows this study to test direct and indirect relationships between variables simultaneously, thereby providing a more comprehensive understanding of the mechanisms for improving teacher performance. Practically, the results of this study can provide input for principals, foundations, and managers of private high schools in designing strategies to increase motivation, strengthen leadership, improve the work climate, and increase teacher job satisfaction. Thus, this study is not only relevant to the development of educational management theory but also has real implications for improving the quality of private school management in Medan City.

Literature Review

Work Motivation

Work motivation is a psychological drive that directs, maintains, and strengthens individual behavior in achieving specific work goals, including in the context of teachers' professional duties in schools [7], [8]. From a self-determination theory perspective, motivation can arise from intrinsic drives, namely the desire to work because of internal meaning and satisfaction, as well as extrinsic drives, namely the desire to work because of external rewards, recognition, or demands [8]. In this study, teacher work motivation can be seen through the dimensions of need for achievement, recognition and appreciation, work responsibility, self-development, and work conditions and support, because these dimensions reflect internal and external drives

that influence teacher work behavior [8], [9]. The need for achievement describes teachers' drive to achieve better work results, while recognition and appreciation reflect teachers' need to receive appreciation for their professional contributions [7], [9]. Work responsibilities, self-development, and working conditions and support are important parts of motivation because teachers need role clarity, opportunities for competency improvement, and a supportive school environment to work optimally [8], [10], [11].

Principal Leadership

Principal leadership is the principal's ability to influence, direct, guide, and motivate teachers so that educational goals and school organizational goals can be achieved effectively [12], [13]. In the school context, principal leadership is not only related to administrative decision-making, but also related to establishing a school vision, improving the quality of learning, teacher development, and creating a conducive work climate [13], [14]. In this study, principal leadership was measured through the dimensions of visionary leadership, managerial leadership, academic supervision, teacher support and empowerment, and communication and social relations, because these five dimensions reflect the principal's role as a learning leader and school organizational manager [13], [15]. Visionary leadership demonstrates the principal's ability to set the school's direction and goals, while managerial leadership reflects the ability to effectively organize programs, resources, and allocate tasks [13], [16]. Academic supervision, teacher support and empowerment, and communication and social relationships are crucial because teachers need guidance, feedback, trust, and open working relationships to improve their professional performance [12], [14].

Job Satisfaction

Job satisfaction is an individual's positive emotional attitude toward work that arises from an assessment of work experiences, working conditions, work relationships, rewards, and development opportunities within the organization [16], [17]. In the context of teachers, job satisfaction reflects the extent to which teachers feel happy, valued, supported, and comfortable in carrying out their teaching duties and school responsibilities [7]. In this study, job satisfaction was measured through the dimensions of the work itself, leadership, coworkers, compensation and rewards, development opportunities, and working conditions, because these dimensions represent the main aspects that shape teachers' attitudes toward their work [17]. The work itself reflects teachers' satisfaction with teaching and educational activities, while leadership and coworkers indicate satisfaction with superior support and social relationships within the school environment [15], [17]. Compensation and rewards, development opportunities, and working conditions are important dimensions because teachers need well-being, opportunities for competency improvement, and an adequate work environment to maintain job satisfaction and productivity [6], [17].

Teacher Performance

Teacher performance is the result of a teacher's work in carrying out professional duties related to planning, implementation, assessment, competency development, discipline, and student development [6], [14]. In the context of formal education, teacher performance is not only seen from the ability to deliver material, but also from the ability to design learning, manage the learning process, evaluate learning outcomes, and develop student potential (Ministry of Education, Culture, Research, and Technology, 2022a; Ministry of Education, Culture, Research, and Technology, 2022b). In this study, teacher performance was measured through the dimensions of learning planning, learning implementation, learning evaluation, professional competence, discipline and work responsibility, and student development, because these dimensions reflect the main tasks of teachers as professional educators (Ministry of Education, Culture, Research, and Technology, 2022a; Ulfiani et al., 2025). Learning planning reflects a teacher's ability to prepare objectives, materials, methods, media, and assessments, while learning implementation demonstrates a teacher's ability to manage teaching and learning activities effectively [18]. Learning evaluation, professional competence, work discipline and responsibility, and student development are important parts of teacher performance because teachers are responsible for assessing learning outcomes, mastering material, maintaining work ethics, and supporting students' academic and character development [6], [18].

Hypothesis Development

High work motivation can make teachers feel more meaningful in carrying out their professional duties because work is seen as a space for achievement and development. The dimensions of need for achievement, recognition and appreciation, work responsibility, self-development, and working conditions and support can increase teachers' positive perceptions of their work and school. Teachers who feel their work is appreciated, have clear responsibilities, and receive adequate work support tend to have higher job satisfaction. Research by Ompusunggu et al. (2025) shows that motivation has a significant influence on teacher job satisfaction and performance [7]. Therefore, the proposed hypothesis is that work motivation has a positive effect on teacher job satisfaction.

H1: Work motivation has a positive effect on teacher job satisfaction.

Effective principal leadership can create a sense of security, appreciation, and support in teachers, thereby increasing their job satisfaction. The dimensions of visionary leadership, managerial leadership, academic supervision, teacher support and empowerment, and communication and social relationships play a role in shaping teachers' work experiences in schools. Principals who are able to provide direction, guide learning, empower teachers, and build open communication will create a more conducive work climate. Juhji et al. (2022) found a significant relationship between principal leadership and teacher job satisfaction through a meta-analysis, while Shi et al. (2024) also showed that various principal leadership styles are positively correlated with teacher job satisfaction based on a meta-analysis of 98 articles [12], [15]. Therefore, the proposed hypothesis is that principal leadership has a positive effect on teacher job satisfaction.

H2: Principal leadership has a positive effect on teacher job satisfaction.

High job satisfaction can encourage teachers to work with greater discipline, responsibility, and focus on improving the quality of learning. The dimensions of the job itself, leadership, coworkers, compensation and rewards, development opportunities, and working conditions can shape teachers' positive attitudes toward teaching duties and school obligations. Teachers who are satisfied with their jobs tend to be better prepared to develop lesson plans, implement effective learning, conduct evaluations, and develop students. Rudiantna et al. (2025) found that job satisfaction has a positive and significant effect on teacher performance [6], while Sofyan et al. (2024) showed that job satisfaction and work motivation positively influence teacher performance at SMA Negeri 9 Medan [19]. Therefore, the proposed hypothesis is that job satisfaction has a positive effect on teacher performance.

H3: Job satisfaction has a positive effect on teacher performance.

Strong work motivation can encourage teachers to carry out their teaching duties more optimally because they have the drive to achieve, be responsible, and continuously develop themselves. The dimensions of need for achievement, recognition and appreciation, work responsibility, self-development, and working conditions and support can strengthen positive teacher work behavior. Teachers with high motivation tend to be better at lesson planning, lesson implementation, lesson evaluation, professional competence, work discipline and responsibility, and student development. Sofyan et al. (2024) found that work motivation has a positive and significant effect on high school teacher performance [19], while Ompusunggu et al. (2025) showed that motivation significantly influences teacher performance through both direct and indirect channels [7]. Therefore, the proposed hypothesis is that work motivation has a positive effect on teacher performance.

H4: Work motivation has a positive effect on teacher performance.

Principal leadership can influence teacher performance because the principal acts as a visionary director, school administrator, academic supervisor, and professional support provider. The dimensions of visionary leadership, managerial leadership, academic supervision, teacher support and empowerment, and communication and social relationships can help teachers work more focused and productively. Principals who are able to establish a clear school direction, conduct supervision, and create good communication will help teachers improve the quality of learning planning, implementation, and evaluation. Leithwood et al. (2020) emphasized the importance of school leadership in influencing teacher behavior, motivation, and teaching conditions [13], while a systematic review by Ulfiani et al. (2025) showed that principal leadership

influences teacher performance through factors such as motivation, trust, professional development, job satisfaction, and professional learning [14]. Therefore, the proposed hypothesis is that principal leadership has a positive effect on teacher performance.

H5: Principal leadership has a positive effect on teacher performance.

Work motivation not only directly influences teacher performance but can also improve performance through job satisfaction. Dimensions of work motivation, such as the need for achievement, recognition and rewards, job responsibility, self-development, and working conditions and support, can make teachers feel more satisfied with their jobs. This satisfaction is then reflected in the dimensions of the job itself, leadership, coworkers, compensation and rewards, development opportunities, and working conditions, which ultimately drive teacher performance. Ompusunggu et al. (2025) found that job satisfaction mediated the relationship between teacher motivation and performance [7], and Rudianta et.al (2025) also showed that work motivation indirectly influences teacher performance through job satisfaction [6]. Therefore, the proposed hypothesis is that job satisfaction mediates the effect of work motivation on teacher performance.

H6: Job satisfaction mediates the effect of work motivation on teacher performance.

Principal leadership can improve teacher performance by creating a satisfying work experience for teachers. The dimensions of visionary leadership, managerial leadership, academic supervision, teacher support and empowerment, and communication and social relationships can shape teacher satisfaction with their leaders, working conditions, development opportunities, and work relationships. When teachers are satisfied, they are more likely to demonstrate good performance in lesson planning, lesson implementation, lesson evaluation, professional competence, discipline and work responsibility, and student development. Rudianta et al. (2025) showed that principal leadership positively influences job satisfaction and job satisfaction positively influences teacher performance [6], while Juhji et al. (2022) strengthened the theoretical basis for the relationship between principal leadership and teacher job satisfaction [4]. Therefore, the proposed hypothesis is that job satisfaction mediates the influence of principal leadership on teacher performance.

H7: Job satisfaction mediates the influence of principal leadership on teacher performance.

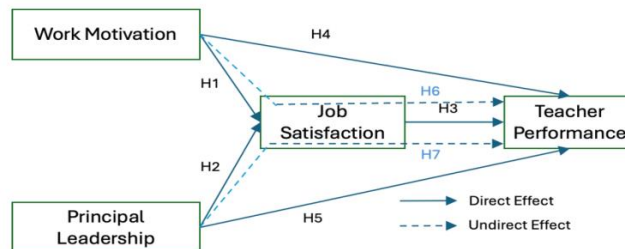


Fig. 1: Research Framework

The research framework shows that work motivation and principal leadership influence teacher performance, both directly and indirectly through job satisfaction as an intervening variable. High work motivation can increase teacher job satisfaction, while effective principal leadership can create a supportive work environment and make teachers more satisfied in their work. Furthermore, good job satisfaction will encourage teachers to improve their performance in planning, implementing, evaluating learning, and carrying out professional responsibilities. Therefore, this study examines the direct influence of work motivation and principal leadership on teacher performance, as well as their indirect influence through job satisfaction.

II. METHODS

This study used a quantitative approach with an explanatory-causal design, as it aimed to examine the influence of work motivation and principal leadership on teacher performance through job satisfaction as an intervening variable. The quantitative approach was used because the research data were collected in numerical form through a structured questionnaire and analyzed statistically to test the relationship between variables [20]. The study population was 217 respondents, consisting of 180 teachers and 37 educators from 7 active private high schools in Medan Petisah District, Indonesia. The sampling technique used saturated

sampling or total population sampling, because all members of the population were given the opportunity to become research respondents [21]. Of the 217 questionnaires distributed, 198 questionnaires were returned and were eligible for analysis, so the research response rate reached approximately 91.24%. The inclusion criteria in this study were active teachers and educators at private high schools in Medan Petisah District, had worked for at least one year, understood the conditions of principal leadership, and were willing to complete the questionnaire completely. Exclusion criteria included respondents who were not actively working at the school, had worked for less than one year, served as principal, or incompletely completed the questionnaire. Saturated sampling was considered appropriate because the population size was relatively limited and the entire target population could be reached, thus ensuring that the data obtained were more representative of the conditions of teachers and educational staff at private high schools in Medan Petisah District.

The primary data source for this study was primary data obtained through questionnaires distributed to respondents. The research instrument was structured based on indicators of four main variables: work motivation, principal leadership, job satisfaction, and teacher performance, using a Likert scale to capture respondents' perceptions of each statement. The collected data were analyzed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS) because this method is suitable for simultaneously testing direct and indirect relationships between latent variables, including mediation models [22]. The analysis stage was carried out systematically through outer and inner model testing. Outer model testing was conducted to ensure the validity and reliability of the instrument through outer loading values, Average Variance Extracted (AVE), Cronbach's Alpha, Composite Reliability, and discriminant validity such as HTMT. After the instrument met the validity and reliability criteria, the analysis continued the inner model through multicollinearity/VIF testing, R-Square, F-Square, path coefficients, and hypothesis testing using bootstrapping techniques. The indirect effect was tested to determine the role of job satisfaction as an intervening variable in the relationship between work motivation and principal leadership on teacher performance. With these steps, this study is expected to produce valid, reliable findings that align with the research objectives in explaining the factors that influence the performance of private high school teachers in Medan Petisah District.

III. RESULT AND DISCUSSION

Demographic Result

Table 1. Respondent Characteristic Result

Characteristic Respondent	N	%	Characteristic Respondent	N	%		
Gender	Male	93	47	Educator certification	Certified	153	77
	Female	105	53		Uncertified	45	23
Age (years)	< 25	3	2	Employee Work Period	< 1 year	35	18
	25–34	35	18		1–5 years	45	23
	35–45	66	33		6–10 years	67	34
	46–55	58	29		11–15 years	27	14
	> 56	36	18		> 15 years	24	12
Monthly Income (IDR - Million)	< 2	8	4	Attended training in the last 1 year	Ever	135	68
	2,1 - 4	34	17		Never	63	32
	4,1 - 6	104	53	Employment status	Permanent foundation	123	62
	> 6,1	52	26		Non-permanent	24	12
Highest education	High School	3	2	Contract	16	8	
	Diploma	65	33	Permanent staff	35	18	

Bachelor	102	52
Master's	28	14

Based on Table 1, the characteristics of the respondents show that this study involved 198 respondents from private high schools in Medan Petisah District, with a more dominant composition of women as many as 105 people (53%) compared to men as many as 93 people (47%). In terms of age, most respondents were in the 35–45 year group as many as 66 people (33%), followed by 46–55-year-olds as many as 58 people (29%), which indicates that most respondents were in the mature working age and had sufficient experience in the school environment. Based on monthly income, most respondents had an income of IDR 4.1–6 million as many as 104 people (53%), while the last level of education was dominated by bachelor's graduates as many as 102 people (52%) and diplomas as many as 65 people (33%), so that respondents had an educational background that was quite relevant to assess aspects of work motivation, principal leadership, job satisfaction, and teacher performance. In addition, the majority of respondents have teacher certification as many as 153 people (77%), the most work period is in the 6-10 years category as many as 67 people (34%), and as many as 135 people (68%) have participated in training in the past year, which indicates the existence of professional experience and quite good competency development. In terms of employee status, most respondents have permanent foundation status as many as 123 people (62%), so it can be concluded that the majority of respondents have a relatively stable working relationship, adequate experience, and a fairly strong understanding of school conditions, so that the data obtained is suitable for analyzing the relationship between work motivation, principal leadership, job satisfaction, and teacher performance.

Results of the Analysis SEM PLS

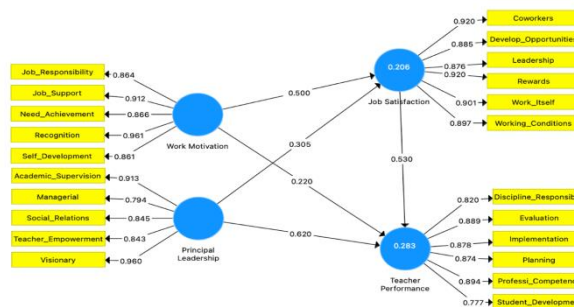


Fig. 2. The results of the SEM PLS (Outer Loading)

Based on the attached SEM-PLS results image (figure 2), all indicators in each variable have outer loading values above 0.70, so they can be declared to have met the convergent validity criteria [22]. In the Work Motivation variable, the loading value is between 0.861–0.961, with the Recognition indicator (0.961) as the most dominant indicator, which indicates that recognition and appreciation are the strongest aspects in shaping teacher work motivation. In the Principal Leadership variable, the loading value is between 0.794–0.960, with the Visionary indicator (0.960) as the strongest indicator, so that the principal's visionary leadership is the main aspect in explaining the principal's leadership. The Job Satisfaction variable also shows very good loading, which is between 0.876–0.920, with the Coworkers and Rewards indicators each at 0.920, which means that relationships with coworkers and appreciation are important factors in job satisfaction. Furthermore, the Teacher Performance variable has a loading value between 0.777–0.894, with the Professional Competence indicator (0.894) as the strongest indicator in reflecting teacher performance. In terms of the relationship between variables, Work Motivation has a positive effect on Job Satisfaction of 0.500, while Principal Leadership has a positive effect on Job Satisfaction of 0.305. Then, Job Satisfaction has a positive effect on Teacher Performance of 0.530, Work Motivation has a positive effect on Teacher Performance of 0.220, and Principal Leadership has a positive effect on Teacher Performance of 0.620, so that the principal's leadership appears to be the most dominant direct factor in improving teacher performance. The R-Square Job Satisfaction value of 0.206 indicates that work motivation and principal leadership are able to explain job satisfaction by 20.6%, while the R-Square Teacher Performance value of

0.283 indicates that work motivation, principal leadership, and job satisfaction are able to explain teacher performance by 28.3%, while the rest is influenced by other factors outside the research model.

Table 2. Results of Convergent Validity and Reliability

Variable	Cronbach's Alpha	rho_A	CR	AVE
Work Motivation (X1)	0.945	0.924	0.952	0.798
Principal Leadership (X2)	0.940	0.988	0.941	0.762
Job Satisfaction (Z1)	0.953	0.959	0.962	0.810
Teacher Performance (Y1)	0.927	0.931	0.943	0.734

Based on Table 2, the results of convergent validity and reliability testing indicate that all research variables, namely Work Motivation (X1), Principal Leadership (X2), Job Satisfaction (Z1), and Teacher Performance (Y1) have met the validity and reliability criteria of the measurement model. The Cronbach's Alpha values for all variables are above 0.70, namely 0.945 for Work Motivation, 0.940 for Principal Leadership, 0.953 for Job Satisfaction, and 0.927 for Teacher Performance, so it can be concluded that all indicators have very good internal consistency in measuring each construct. The rho_A values also show good results, namely 0.924, 0.988, 0.959, and 0.931, which means that the construct reliability is adequate. Furthermore, the Composite Reliability (CR) values of all variables are above the minimum limit of 0.70, namely 0.952 for Work Motivation, 0.941 for Principal Leadership, 0.962 for Job Satisfaction, and 0.943 for Teacher Performance, so that all constructs are declared reliable. In terms of convergent validity, the Average Variance Extracted (AVE) values of all variables have also exceeded the minimum limit of 0.50, namely 0.798, 0.762, 0.810, and 0.734, which indicates that each construct is able to explain more than 50% of the variance of its indicators. The highest AVE value is found in Job Satisfaction (0.810), so that the indicators of the job itself, leadership, coworkers, compensation and rewards, development opportunities, and working conditions are very strong in representing job satisfaction. Thus, all variables in this study can be declared valid, reliable, and suitable for use in structural model analysis.

Based on Table 3, the results of the discriminant validity test indicate that all constructs in this study have met the discriminant validity criteria. In the Fornell-Larcker Criterion section, the AVE root value for each variable, namely Job Satisfaction at 0.900, Principal Leadership at 0.873, Teacher Performance at 0.857, and Work Motivation at 0.893, is higher than the correlation value between other variables. For example, the highest correlation is found in the relationship between Principal Leadership and Teacher Performance at 0.729, but this value is still lower than the AVE root of Principal Leadership at 0.873 and Teacher Performance at 0.857, so the two constructs can still be distinguished well. Similarly, the relationship between Work Motivation and Teacher Performance at 0.647, Work Motivation with Principal Leadership at 0.576, and Job Satisfaction with Principal Leadership at 0.559 are still below the AVE root value of each construct.

Table 3. Discriminant Validity Results

Discriminant Validity				
<i>Fornell-Lercker Criterion</i>	JS	PL	TP	WM
Job Satisfaction	0.900			
Principal Leadership	0.559	0.873		
Teacher Performance	0.528	0.729	0.857	
Work Motivation	0.455	0.576	0.647	0.893
<i>Heterotrait-Monotrait Ratio (HTMT)</i>				
Job Satisfaction				
Principal Leadership	0.555			

Discriminant Validity				
Teacher Performance	0.549	0.560		
Work Motivation	0.505	0.607	0.663	

Note: Job Satisfaction (JS), Principal Leadership (PL), Teacher Performance (TP), Work Motivation (WM).

Furthermore, the Heterotrait-Monotrait Ratio (HTMT) results also showed good results because all values were below the general threshold of 0.85, with the highest value of 0.663 in the relationship between Work Motivation and Teacher Performance. Other HTMT values, namely 0.555, 0.549, 0.560, 0.505, and 0.607, also showed that there were no overlapping problems between constructs. Thus, it can be concluded that the variables Work Motivation, Principal Leadership, Job Satisfaction, and Teacher Performance have clear conceptual differences, so that the research model has met discriminant validity and is worthy of being continued with structural model testing.

Table 4. R-Square Adjusted & F-Square Value Result

Variable	F-Square				R-Square	
	JS	PL	TP	WM	R ²	Adjusted
Job Satisfaction			0.390		0.126	0.124
Principal Leadership	0.103		0.105		0.283	0.272
Teacher Performance						
Work Motivation	0.103		0.100			

Note: Job Satisfaction (JS), Principal Leadership (PL), Teacher Performance (TP), Work Motivation (WM)

Based on Table 4, the R-Square results show that the Job Satisfaction variable has an R² value of 0.126 and an Adjusted R² of 0.124, which means that Work Motivation and Principal Leadership are able to explain variations in Job Satisfaction by 12.6%, while the remaining 87.4% is influenced by other factors outside the research model, such as compensation, school culture, workload, job security, organizational relationships, or reward systems. Furthermore, the Teacher Performance variable has an R² value of 0.283 and an Adjusted R² of 0.272, which shows that Work Motivation, Principal Leadership, and Job Satisfaction can explain variations in Teacher Performance by 28.3%, while the remaining 71.7% is influenced by other variables not studied. This value indicates that the model's ability to explain job satisfaction is still relatively low, while the model's ability to explain teacher performance is in the weak to moderate category. Based on the F-Square results, the influence of Job Satisfaction on Teacher Performance has a value of 0.390, which is included in the large category, so that job satisfaction is the strongest variable in driving the improvement of teacher performance. Meanwhile, the influence of Principal Leadership on Job Satisfaction of 0.103, Principal Leadership on Teacher Performance of 0.105, Work Motivation on Job Satisfaction of 0.103, and Work Motivation on Teacher Performance of 0.100 is in the small category but still shows a contribution in the model. Thus, it can be concluded that although work motivation and principal leadership have a contribution to job satisfaction and teacher performance, the most dominant factor in this model is job satisfaction in improving the performance of private high school teachers in Medan Petisah District.

Table 5. Model Fit Test Results

	Saturated Model	Estimated Model
SRMR	0.054	0.054
d_ULS	0.727	0.727
d_G	0.726	0.726
Chi-Square	778.470	778.470
NFI	0.826	0.826
rms Theta	0.178	

Based on Table 5, the results of the Model Fit Test indicate that the research model has a sufficient level of fit, especially seen from the SRMR value of 0.054 in the saturated model and the estimated model, which is below the general limit of 0.08 [22], so the model can be stated to have a good level of fit between

the empirical data and the model built. The d_{ULS} value of 0.727 and d_G of 0.726 indicate the size of the difference between the empirical correlation matrix and the model correlation matrix, but the assessment should be compared with the bootstrap confidence interval value which is not shown in the table. The Chi-Square value of 778.470 indicates a difference between the model and the data, but in SEM-PLS this value is not the main measure because it is greatly influenced by the number of samples and the complexity of the model. Furthermore, the NFI value of 0.826 indicates that the model is in the good category, although it has not reached the ideal criteria because the very good NFI value generally approaches or exceeds 0.90. Meanwhile, the rms Theta value of 0.178 is still above the ideal limit of 0.12, indicating that the measurement model can still be improved. Thus, this research model can be said to be quite feasible to use, especially since the SRMR value has met the criteria, but the model fit is not fully optimal because the NFI value has not reached 0.90 and the rms Theta is still relatively high. Overall, the model can still be continued in structural analysis if the results of convergent validity, reliability, discriminant validity, R-Square, F-Square, and hypothesis testing have met the SEM-PLS criteria.

Table 7. Hypothesis Relationship Results

Hypothesis Relation	O	M	STDEV	T-Statistic	P-Value	Note
H 1 WM → JS	-0.050	-0.058	0.089	0.564	0.573	Rejected
H 2 PL → JS	-0.055	-0.025	0.118	0.470	0.639	Rejected
H 3 JS → TP	0.530	0.529	0.068	7.791	0.000	Accepted
H 4 WM → TP	0.522	0.510	0.094	8.838	0.000	Accepted
H 5 PL → TP	0.662	0.550	0.099	10.059	0.000	Accepted
H 6 WM → JS → TP	-0.029	-0.013	0.063	0.468	0.640	Rejected
H 7 PL → JS → TP	-0.027	-0.031	0.047	0.563	0,574	Rejected

Note: Job Satisfaction (JS), Principal Leadership (PL), Teacher Performance (TP), Work Motivation (WM)

Based on Table 7, the results of the hypothesis testing show that of the seven hypotheses tested, there are three accepted hypotheses and four rejected hypotheses. The rejected hypotheses are H1, H2, H6, and H7, namely the effect of Work Motivation on Job Satisfaction with a coefficient of -0.050, T-statistic 0.564, and P-value 0.573; the effect of Principal Leadership on Job Satisfaction with a coefficient of -0.055, T-statistic 0.470, and P-value 0.639; the indirect effect of Work Motivation on Teacher Performance through Job Satisfaction with a coefficient of -0.029, T-statistic 0.468, and P-value 0.640; and the indirect effect of Principal Leadership on Teacher Performance through Job Satisfaction with a coefficient of -0.027, T-statistic 0.563, and P-value 0.574. These results indicate that work motivation and principal leadership did not significantly influence job satisfaction, thus job satisfaction was unable to act as an intervening variable in the relationship between work motivation and principal leadership on teacher performance. Therefore, in the context of private high schools in Medan Petisah District, teacher job satisfaction is likely more influenced by factors outside the research model, such as compensation, workload, employment status, work environment, reward system, or job security.

Meanwhile, the accepted hypotheses are H3, H4, and H5: the effect of Job Satisfaction on Teacher Performance with a coefficient of 0.530, a t-statistic of 7.791, and a p-value of 0.000; the effect of Work Motivation on Teacher Performance with a coefficient of 0.522, a t-statistic of 8.838, and a p-value of 0.000; and the effect of Principal Leadership on Teacher Performance with a coefficient of 0.662, a t-statistic of 10.059, and a p-value of 0.000. These results indicate that job satisfaction, work motivation, and principal leadership have a direct and significant positive effect on teacher performance. The variable with the most dominant influence is principal leadership, because it has the largest coefficient, so that a visionary principal, capable of managing the school, conducting academic supervision, empowering teachers, and building good communication can encourage improved teacher performance. Overall, these findings confirm that improving the performance of private high school teachers in Medan Petisah District is more effective through strengthening principal leadership, increasing work motivation, and improving job satisfaction directly, rather than through mediation mechanisms.

IV. DISCUSSION

The results of the study indicate that of the seven hypotheses tested, three were accepted and four were rejected. This suggests that work motivation, principal leadership, and job satisfaction have a stronger direct influence on teacher performance than through mediation mechanisms. The accepted hypotheses are the relationships between Job Satisfaction and Teacher Performance, Work Motivation and Teacher Performance, and Principal Leadership and Teacher Performance, while the relationships between Job Satisfaction and the two mediation pathways are rejected. The large number of rejected hypotheses can be explained by the fact that teacher job satisfaction in private high schools is not always formed solely by motivation and leadership but can also be influenced by other factors such as compensation, job security, employment status, workload, school climate, and career development opportunities. These findings align with research by Toropova et al. (2021) which confirms that teacher job satisfaction is strongly influenced by working conditions and school environmental characteristics [23], and by Fatmawati and Khodijah (2024) which shows that leadership, compensation, and motivation jointly influence teacher job satisfaction [24]. Thus, the rejection of the mediation hypothesis does not mean that job satisfaction is not important but rather shows that in this study job satisfaction plays a greater role as a direct predictor of teacher performance, not as a bridge between work motivation and principal leadership on teacher performance.

The test results show that Work Motivation does not have a significant effect on Job Satisfaction, with a coefficient value of -0.050, a t-statistic of 0.564, and a p-value of 0.573, thus H1 is rejected. This finding indicates that dimensions of work motivation, such as the need for achievement, recognition and appreciation, work responsibility, self-development, and working conditions and support, have not been able to significantly increase teacher job satisfaction. Theoretically, this result is inconsistent with Ryan and Deci (2020), who explained that intrinsic and extrinsic motivation can encourage positive work attitudes [8], and is inconsistent with Fatmawati and Khodijah (2024), who found that work motivation has a very significant positive effect on teacher job satisfaction [24]. This difference in results may occur because private high school teachers in Medan Petisah District may still be motivated to work, but their job satisfaction is more influenced by other factors such as compensation, job security, administrative burden, and the school environment. Thus, work motivation in this study appears more as a drive to achieve performance, rather than as the main factor shaping teacher job satisfaction.

The test results show that Principal Leadership does not have a significant effect on Job Satisfaction, with a coefficient value of -0.055, a t-statistic of 0.470, and a p-value of 0.639, thus H2 is rejected. This finding indicates that the dimensions of principal leadership, such as visionary leadership, managerial leadership, academic supervision, teacher support and empowerment, and communication and social relations, are not strong enough to directly shape teacher job satisfaction. Empirically, this result differs from Juhji et al. (2022), who through meta-analysis found a significant correlation between principal leadership and teacher job satisfaction [12], and differs from Shi et al. (2024), who showed that leadership style correlates with teacher job satisfaction [15]. This difference may arise because principals may be perceived to play a role in supervision, direction, and achievement of performance targets, rather than in aspects of teacher psychological well-being. Therefore, in the context of this study, principal leadership has not been proven to increase job satisfaction, but it can still have a direct effect on teacher performance.

The test results show that Job Satisfaction has a positive and significant effect on Teacher Performance, with a coefficient value of 0.530, a t-statistic of 7.791, and a p-value of 0.000, thus H3 is accepted. This means that the higher a teacher's job satisfaction with the job itself, leadership, coworkers, compensation and rewards, development opportunities, and working conditions, the better their performance in lesson planning, lesson implementation, lesson evaluation, professional competence, work discipline and responsibility, and student development. This finding is supported by Utami and Vioreza (2021), who found that job satisfaction has a direct positive effect on high school teacher work productivity [25], as well as Toropova et al. (2021), who emphasized the importance of job satisfaction for teacher well-being, school cohesion, and the sustainability of the teaching profession [23]. These results show that when teachers are satisfied with their work environment and job, they tend to demonstrate better work energy, engagement, and

professional responsibility. Thus, job satisfaction is an important factor that private schools need to pay attention to to improve the quality of teacher performance.

The test results show that Work Motivation has a positive and significant effect on Teacher Performance, with a coefficient value of 0.522, a t-statistic of 8.838, and a p-value of 0.000, thus H4 is accepted. This finding indicates that dimensions of work motivation, such as the need for achievement, recognition and appreciation, work responsibility, self-development, and working conditions and support, can encourage teachers to work more optimally. This result is in line with Amtu et al. (2020), who found that work motivation has a direct influence on teacher performance [26], and Layek and Koodamara (2024), who showed a strong positive relationship between intrinsic and extrinsic motivation and teacher performance [27]. In the context of private high schools in Medan Petisah District, teachers who have a high achievement drive and sense of responsibility tend to be better prepared to develop teaching materials, implement learning, evaluate learning outcomes, and guide students. Thus, work motivation is proven to be an important direct factor in improving teacher performance.

The test results show that Principal Leadership has a positive and significant effect on Teacher Performance, with a coefficient value of 0.662, a t-statistic of 10.059, and a p-value of 0.000, so H5 is accepted. This coefficient value is the largest among other direct relationships, so that principal leadership is the most dominant factor in improving teacher performance. This finding is in line with Leithwood et al. (2020), who emphasized that school leadership is an important factor in influencing school organization and learning quality [13], and is supported by findings in Asiah et al. (2021), showed that principal leadership and work motivation are related to high school teacher performance [28]. In the context of this study, the dimensions of visionary leadership, managerial leadership, academic supervision, teacher support and empowerment, and communication and social relations can help teachers work more focused, disciplined, and professional. Thus, the better the principal's leadership, the higher the performance of private high school teachers in Medan Petisah District.

The test results show that the indirect effect of Work Motivation on Teacher Performance through Job Satisfaction is not significant, with a coefficient value of -0.029, a t-statistic of 0.468, and a p-value of 0.640, thus H6 is rejected. This rejection can be explained because the first path, namely Work Motivation on Job Satisfaction, is also insignificant, so the mediation requirement is not empirically met. This result differs from Fatmawati and Khodijah (2024), who found that work motivation has a positive effect on teacher job satisfaction, and differs from path-based research that shows that work motivation can contribute to educational outcomes through teacher performance [24]. However, this result is logical if we consider that work motivation in this study has a strong direct effect on teacher performance, so that the drive for achievement, responsibility, and self-development emerge more quickly in work behavior compared to prior satisfaction. Thus, job satisfaction is not proven to be an intervening variable in the relationship between work motivation and teacher performance, because work motivation in this study functions more as a direct driver of teacher performance.

The test results show that the indirect effect of Principal Leadership on Teacher Performance through Job Satisfaction is not significant, with a coefficient value of -0.027, a t-statistic of 0.563, and a p-value of 0.574, thus H7 is rejected. This rejection occurs because the path of Principal Leadership to Job Satisfaction is also insignificant, so job satisfaction is unable to bridge the relationship between principal leadership and teacher performance. This result differs from Juhji et al. (2022) and Shi et al. (2024), who found that principal leadership is related to teacher job satisfaction, but is in line with findings showing that in some contexts, principal supervision is not always able to directly increase teacher job satisfaction [12], [15]. In the context of private high schools, the principal may play a more direct role, supervising, and controlling the quality of learning, so its influence is directly seen in teacher performance, not through job satisfaction. Thus, principal leadership in this study is more appropriately understood as a structural and managerial factor that directly improves teacher performance, rather than as a factor that first increases job satisfaction.

V. CONCLUSION

This study aims to analyze the influence of work motivation and principal leadership on the performance of private high school teachers in Medan Petisah District, using job satisfaction as an intervening variable. Based on the results of the hypothesis testing, it was found that work motivation did not significantly influence job satisfaction, and principal leadership also did not significantly influence job satisfaction. These findings indicate that teacher job satisfaction in the context of private high schools is not solely determined by work motivation and principal leadership, but is likely influenced by other factors such as compensation, employment status, workload, job security, financial rewards, and the school's organizational climate. Therefore, the research question regarding the influence of work motivation and principal leadership on job satisfaction has not been empirically proven in this study. These results demonstrate that teacher job satisfaction is a complex construct and is not always directly derived from motivation or leadership.

The next main finding indicates that job satisfaction, work motivation, and principal leadership have a positive and significant influence on teacher performance. This means that teachers who are satisfied with their work, have high work motivation, and are under the leadership of an effective principal tend to demonstrate better performance in lesson planning, lesson implementation, learning evaluation, professional competence, discipline, work responsibility, and student development. Among these three variables, principal leadership has the most dominant influence on teacher performance, thus the principal plays a strategic role in directing, coaching, supervising, empowering, and building work communication that supports teacher performance improvement. This finding addresses the research question formulation: the improvement in the performance of private high school teachers in Medan Petisah District is more strongly explained by the direct influence of principal leadership, work motivation, and job satisfaction. Therefore, teacher performance improvement needs to be directed at strengthening principal leadership, increasing work motivation, and directly improving aspects of job satisfaction.

The novelty of this study lies in the finding that job satisfaction was not proven to be an intervening variable in the relationship between work motivation and principal leadership on teacher performance. Theoretically, this study expands understanding in educational organizational behavior theory that work motivation and principal leadership do not always improve teacher performance through job satisfaction, but can work directly on performance. These findings indicate that in the context of private high schools, teachers can maintain high performance due to professional responsibility, achievement motivation, supervision, principal direction, and organizational demands, even though job satisfaction does not act as a significant mediating pathway. Thus, this study provides a theoretical contribution by clarifying that job satisfaction is more appropriately positioned as a direct predictor of teacher performance, rather than as a link between work motivation and principal leadership on performance. Practically, these results confirm that foundations and principals need to manage motivation, leadership, and job satisfaction as independent yet complementary strategies to improve teacher performance.

Future research is recommended to expand the model by incorporating other variables more closely related to the formation of teacher job satisfaction, such as compensation, workload, school organizational climate, school culture, job security, work engagement, organizational commitment, teacher welfare, and foundation support. Future research could also compare public and private high schools or expand the research area to several sub-districts in Medan City to increase the generalizability of the results. Furthermore, future research could employ a mixed methods approach with in-depth interviews with teachers and principals to understand why work motivation and principal leadership do not significantly influence job satisfaction. For school or foundation administrators, the results of this study can serve as a basis for developing policies to improve teacher performance through programs to strengthen principal leadership, provide professional teacher training, implement a fair reward system, improve welfare, and create a more conducive work environment. Therefore, further research is expected to address the limitations of the current model and provide more comprehensive recommendations for improving the quality of private school management.

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