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# The Influence of Principal Leadership, Teacher Work Motivation, and School Culture on the Professional Competence of State Vocational High School Teachers in Jepara Regency with Rewards as a Moderating Variable

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### Abstract

Teacher professional competence is the main determinant of the quality of vocational education and is crucial for State Vocational High Schools in Jepara Regency in facing the challenges of the modern era, especially related to competency renewal, creativity, and suboptimal technology adaptation among some teachers. This study aims to analyze the partial influence of principal leadership, teacher work motivation, and school culture on teacher professional competence, as well as the role of rewards as a moderating variable. Quantitative research methods were used with a population of teachers and a sample of teachers from State Vocational High Schools. Data collection was carried out through a questionnaire instrument, and analyzed using multiple regression, Moderated Regression Analysis, and partial t-test. The results showed that principal leadership, teacher work motivation, and school culture partially have a positive and significant effect on teacher professional competence, where work motivation shows the most dominant influence. An important finding is that rewards are proven to be able to moderate and strengthen the relationship between principal leadership and school culture on teacher professional competence, but do not moderate the effect of teacher work motivation. The coefficient of determination indicates that the variation in teachers' professional competence can be explained by the independent variables. This finding contributes to emphasizing the need for an integrated reward system to optimize the impact of organizational factors in improving teacher professionalism.

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### INTRODUCTION

Education is an essential vehicle for improving a nation's human resources, serving as the foundation for national progress through the creation of quality human resources. To achieve this goal, the role of teachers is crucial as they determine the success of the educational and

learning mission in schools (Kristiawan in Wartini, 2022: 1). Teachers are responsible not only for delivering material but also for organizing, directing, and creating a conducive atmosphere that encourages the learning process. Therefore, teacher competence is the spearhead

and one of the primary determinants of educational success (Wartini, 2022: 1).

Regulations in Indonesia, through the Regulation of the Minister of National Education of the Republic of Indonesia Number 16 of 2007, require teachers to have four main competencies: pedagogical, personality, social, and professional. The focus of this research is teacher professional competence which includes the ability to master learning materials broadly and deeply, as well as professional development skills. Teacher professional competence is becoming increasingly crucial in State Vocational High Schools (SMK), where the demand to produce graduates who are work-ready and adaptive to industrial technology developments is very high.

Although teacher professional competence is a requirement, initial observations at State Vocational High Schools in Jepara Regency indicate significant challenges. Identified problems include: (1) not all teachers are able to update their competency quality according to curriculum and technology developments, (2) lack of creativity in adapting technology and learning methods, and (3) not all teachers have professional/certified status. This gap between the ideal demands and the reality of teacher professional competence is what drives in-depth research on the determining factors. This research has high urgency considering that the quality of teacher professional competence is a prerequisite for the success of vocational education in the industrial era 4.0.

Optimal teacher professional competence is greatly influenced by interacting internal and external organizational variables.

First, principal leadership serves as a key external factor. Principals play a strategic role in managing, coaching, and empowering teachers to continuously improve their performance (Wartini, 2022: 1). Empirical research has shown that a principal's leadership style significantly influences teacher performance/competence (Sukiyanto & Tsalisatul Maulidah, 2020; Titik Handayani & Aliyah, 2015). Transformational and supportive leadership will foster a climate of innovation that indirectly demands improved teacher competence.

Second, school culture serves as a framework of values and norms that unite the diverse character of teachers to achieve the school's vision, mission, and goals. A positive organizational culture or school climate, such as that shaped by discipline and responsibility, has been shown to significantly influence teacher performance and competence (Endang & Yelvia, 2014; Nurliah et al., 2016). A strong culture facilitates collective learning and knowledge exchange, which are essential for teachers' professional competence.

Third, teacher work motivation is an internal factor that acts as a driving force for teachers in carrying out their duties. High motivation (especially hygiene motivation and motivator motivation according to Herzberg) will encourage teachers to be highly responsible, develop themselves, and be independent (Dasmadi, 2021). Consistent with this theory, other studies have also found that teacher work motivation consistently has a positive and significant effect on teacher professional competence (Saripudin, 2014; Nurliah et al., 2016).

Although the relationship between leadership, motivation, and culture and competence has been extensively researched, findings are often inconsistent across study areas. This inconsistency suggests the need for a mediating or moderating variable capable of explaining how and under what conditions these independent variables exert their most optimal influence.

The primary focus of this research is the examination of the role of rewards as a moderating variable. Rewards are recognition given for contributions or performance, which theoretically can strengthen the impact of principal leadership and school culture. This study hypothesizes that the positive influence of principal leadership and school culture on teacher professional competence will be stronger and more significant if supported by a fair and transparent *reward system*. Testing this moderation hypothesis is the development of a theoretical model that fills a gap in the literature

on the mechanisms of influence in vocational schools.

The applied aspect of this research is the development of a model that integrates organizational factors with reward systems. This model provides practical recommendations to stakeholders for designing a performance-based *reward system* that can stimulate extrinsic motivation, thereby collectively enhancing teacher professionalism.

Based on the background of the study, the identified research problems, and the need to examine moderation mechanisms that have not been sufficiently addressed in previous literature, this research aims to analyze the partial effects of principal leadership, teacher work motivation, and school culture on the professional competence of state vocational school teachers in Jepara Regency. In addition, this study seeks to examine whether rewards function as a moderating variable that can strengthen the influence of principal leadership, teacher work motivation, and school culture on the professional competence of state vocational school teachers in Jepara Regency.

## METHOD

This study used a quantitative approach. The population was all 619 state vocational high school teachers in Jepara Regency, with a sample size of 235 teachers determined using the Krejcie table. The schools where the study was conducted included nine state vocational high schools in Jepara Regency.

The research variables consist of independent variables (X): Principal Leadership ( $X_1$ ), Teacher Work Motivation ( $X_2$ ), and School Culture ( $X_3$ ); dependent variable (Y): Teacher Professional Competence; and moderating variable (M): Reward or Appreciation.

The data collection technique used a questionnaire instrument distributed to 235 respondents. The questionnaire was compiled using the Likert Scale Model (Sugiyono, 2018), with a gradation of answers from Strongly Agree

(score 5) to Strongly Disagree (score 1), which is suitable for measuring attitudes and perceptions towards certain social phenomena. Before use, the research instrument has undergone Validity and Reliability tests to ensure its validity.

## RESULTS AND DISCUSSION

Based on the Descriptive Statistics table below, after analysis it shows that Teacher Professional Competence (Y), Principal Leadership ( $X_1$ ), Teacher Work Motivation ( $X_2$ ), School Culture ( $X_3$ ), and Rewards (M) are generally in the good or fairly good category.

Table 1. Descriptive Statistics

Descriptive Statistics					
	N	Min	Max	Mean	Std. Deviation
Principal Leadership	235	51	125	110.36	10.746
Teacher Work Motivation	235	105	150	129.90	10.564
School Culture	235	86	115	102.48	9.096
Reward	235	47	95	80.02	8.004
Teacher Professional Competency	235	74	115	99.88	9.587
Valid N (listwise)	235				

Based on the results of hypothesis testing using multiple regression analysis and partial t-tests, the findings indicate that principal leadership ( $X_1$ ) has a positive and significant influence on teacher professional competence (Y). Teacher work motivation ( $X_2$ ) also shows a positive and significant effect on teacher professional competence and emerges as the most dominant variable, as indicated by the highest regression coefficient value among the predictors. In addition, school culture ( $X_3$ ) has a positive and significant influence on teacher professional competence. These results demonstrate that effective leadership, strong work motivation, and a supportive school culture collectively and individually contribute to enhancing teachers' professional competence.

Table 2. Multiple Regression Test and t

Variable	B	Std. Error	Beta	t	Sig.
Constant	5.212	5.001	–	1.042	0.298
Principal Leadership (X <sub>1</sub> )	0.173	0.053	0.194	3.242	0.001
Teacher Work Motivation (X <sub>2</sub> )	0.454	0.067	0.500	6.796	0.000
School Culture (X <sub>3</sub> )	0.163	0.073	0.154	2.220	0.027

### Moderated Regression Testing

The results of the Moderated Regression Analysis (MRA) indicate that rewards play a significant moderating role in certain relationships within the model. Specifically, rewards are proven to moderate and strengthen the influence of principal leadership (X<sub>1</sub>) on teacher professional competence (Y), as well as the influence of school culture (X<sub>3</sub>) on teacher professional competence, leading to the acceptance of both hypotheses. However, rewards do not moderate the relationship between teacher work motivation (X<sub>2</sub>) and teacher professional competence, resulting in the rejection of this hypothesis. These findings suggest that rewards are more effective in reinforcing organizational and leadership factors than individual motivational factors in enhancing teacher professional competence.

Table 3. Moderation Regression Test Results(interaction of variables Y and X<sub>1</sub>)

Model	Coefficients <sup>a</sup>				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
B	Std. Error	Beta			
(Constant)	21.910	4.667		4.695	.000
Principal Leadership (X <sub>1</sub> )	.506	.056	.567	8.961	.000
Reward (M)	.260	.074	.217	3.506	.001
X <sub>1</sub> cMc	.022	.003	.327	7.262	.000

a. Dependent Variable: Teacher Professional Competence (Y)

Table 4. Moderation Regression Test Results (interaction of variables Y and X<sub>2</sub>)

Model	Coefficients <sup>a</sup>		t	Sig.	
	B	Std. Error	Beta		
(Constant)	9.990	5.260		1.899	.059
Teacher Work Motivation (X <sub>2</sub> )	.571	.050	.629	11.332	.000
Reward (M)	.191	.068	.159	2.789	.006
X <sub>2</sub> cMc	.009	.005	.083	1.839	.067

a. Dependent Variable: Teacher Professional Competence (Y)

Table 5. Moderation Regression Test Results (interaction of variables Y and X<sub>3</sub>)

Model	R	R Square	Adjusted R Square	Model Summary	
				Std. Error of the Estimate	
1	.781 <sup>a</sup>	.610	.605	6.024879	

a. Predictors: (Constant), Kepemimpinan Kepala sekolah, Budaya Sekolah, Motivasi Kerja Guru

Table 6. Determination Coefficeint Test

Model	Coefficients <sup>a</sup>				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
B	Std. Error	Beta			
(Constant)	22.974	5.208		4.412	.000
School Culture (X <sub>3</sub> )	.534	.062	.507	8.586	.000
Reward (M)	.262	.074	.219	3.546	.000
X <sub>3</sub> cMc	.026	.007	.173	3.616	.000

a. Dependent Variable: Teacher Professional Competence (Y)

### Discussion

These findings consistently indicate that principal leadership, teacher work motivation, and school culture are significant predictors of KPG improvement. Teacher work motivation has the highest regression coefficient, confirming that teachers' internal drive to achieve (need for achievement) is the most dominant factor. The higher the teacher work motivation, the better the KPG, as demonstrated by high levels of responsibility, self-development, and independence in carrying out tasks. These results align with research by Saripudin (2014) and Nurliah et al. (2016).

A key finding of this study is the role of rewards as a moderating variable, proven to strengthen the influence of organizational factors, namely principal leadership and school culture, on the KPG. This means that good principal leadership and a positive school culture will have a more optimal and powerful impact on the KPG if accompanied by fair and transparent rewards. In this context, rewards act as a catalyst, transforming potential influence into concrete actions on teacher performance.

## CONCLUSION

Based on the analysis of the research results, it can be concluded that principal leadership, teacher work motivation, and school culture partially have a positive and significant influence on the professional competence of State Vocational High School teachers in Jepara Regency. The most crucial finding is that the reward variable is proven to be able to moderate and strengthen the relationship between principal leadership and school culture on teacher professional competence, but is unable to moderate the relationship between teacher work motivation. The contribution of this research to science is to strengthen the understanding that in the context of vocational education, the effectiveness of organizational factors (principal leadership and school culture) in improving teacher professionalism is highly dependent on the existence of an optimal, transparent, and performance-based reward system, so that this research provides a more comprehensive model for improving the quality of education.

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