The Influence of Principal Managerial Competence and School Culture on School Quality at Elementary School

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Abstract: This research aims to achieve the following objectives: (1) to determine the effect of the managerial competence of school principals on school quality, (2) to assess the impact of school culture on school quality, and (3) to examine the combined influence of the managerial competence of school principals and school culture on school quality at SD Gugus Pattimura, Dawe District, Kudus Regency. A quantitative approach was utilized, employing correlational research to investigate the differences in influence. The study population comprised elementary school teachers in the Pattimura Group, Dawe District, Kudus Regency, totaling 50 individuals, with a sample size of 33 selected using proportional random sampling. Data analysis involved three stages: initial analysis (including data normality, heteroscedasticity, multicollinearity, autocorrelation, and linearity tests), final analysis (comprising single and multiple regression tests), and determination analysis to quantify the contribution of independent variables to the dependent variable as a percentage. The findings of this study are as follows: (1) The managerial competence of principals positively and significantly impacts school quality by 69.1%, confirming the first hypothesis. (2) School culture has a positive and significant effect on school quality, accounting for 86.2%, supporting the second hypothesis. (3) The combined influence of managerial competence and school culture on school quality is both positive and significant, contributing 91.3%, thereby validating the third hypothesis.

Keywords: Principal managerial competency, school culture, and school quality

1.   Introduction

The quality of a school is significantly influenced by the work of the principal. Society increasingly demands high-quality leadership from principals, considering it a key criterion for school success and quality, as reflected in school accreditation levels. Both the community and the government have high expectations that schools will produce graduates who meet societal needs. Therefore, effective principals are essential. The success or failure of education and learning in schools is largely determined by the principal's abilities in various aspects of school management (Anjar, 2020). According to Laiv (2022), the principal plays a crucial role in the effective and efficient utilization of all professional staff to provide education that achieves the best outcomes. A key factor in effective school leadership is the principal's leadership ability, which includes planning, organizing, directing, and monitoring.

Owan and Agunwa (2019) states that a principal's supervisory competence encompasses their ability to plan, organize, direct, coordinate, and utilize all available resources to achieve the school's goals. A competent principal is responsive to changes within the school environment and has the capacity to manage the organization effectively, adapting to necessary changes. However, principals in Indonesia often face limited autonomy in managing schools and allocating financial resources. Effective school administration requires strong leadership, characterized by the principal's ability to initiate new thinking and adjustments in goals, procedures, inputs, processes, or outputs to meet developmental needs (Sumidjo, 2002).

Leadership skills of a school principal also include creating a conducive school culture and atmosphere for student learning and innovation, empowering teachers to make decisions, and fostering a sense of responsibility. The principal's teaching competence involves developing cooperation among staff to achieve educational goals through planning, organizing, implementing, and directing school activities in line with the school's vision (Tanjung et al., 2021). Effective leadership includes essential management skills such as planning, organizing, directing, and monitoring. Owan and Agunwa (2019) emphasizes that these supervisory competencies are vital for achieving school goals.

In addition to leadership skills, the effectiveness of a school can be enhanced by fostering a strong school culture. School culture encompasses the dominant values or philosophy that guides school policy and influences all elements and stakeholders, including students, teachers, and the community. It involves a system of values, beliefs, and norms that shape behavior and create a common understanding among all school members (Fajrie et al., 2022). The quality of teaching is a critical measure of a school's success, and a high-quality school is characterized by a positive climate, inclusive planning, high academic expectations, and effective monitoring of student progress and teacher effectiveness (Fagir, 2018).

The principal, as the highest leader in the school, plays a pivotal role in the development and advancement of the school. Principals are responsible for ensuring high-quality education and managing all learning units effectively. Their leadership styles and attitudes, such as being flexible, honest, open to new ideas, democratic, and responsible, are crucial for school progress (Laela et al., 2023). Effective principals plan, develop, manage, and authorize the achievement of school goals, embodying exemplary leadership qualities (Iskandar, 2013). The indicators for measuring a principal's management skills are: 1) Planning: Preparing comprehensive school plans at various levels; 2) Organizing: Developing the school organization according to needs; 3) Control: Managing schools to maximize resource use, facilitating effective learning organizations, creating a conducive and innovative school atmosphere, managing human resources optimally, and engaging the community in decision-making; 4) Monitoring: Conducting monitoring, evaluation, and reporting on the implementation of school operational programs.

The objectives of this research are to: 1) Analyze and determine the influence of principals' managerial competence on the quality of elementary schools in Gugus Pattimura, Dawe District, Kudus Regency; 2) Analyze and determine the impact of school culture on the quality of elementary schools in the Pattimura Group, Dawe District, Kudus Regency; and 3) Analyze and determine the combined effect of school culture and principals' managerial competence on the quality of elementary schools in Dawe District, Kudus Regency.

2. Literature Review

2.1 School Culture

Culture is a pattern of basic assumptions about life that are collectively believed, created, invented, or developed by a group of people to solve their life problems. These assumptions are taught and passed on from generation to generation, guiding behavior, thinking, and fostering a sense of belonging among group members. Culture can be studied on three levels: artifacts, values, and basic assumptions. According to Narayan (2016), culture is an integrated pattern of human behavior that includes thoughts, speech, actions, and objects, relying on people's ability to listen and transmit information to the next generation (Wibowo & Phil, 2016). Cartwright and Baron (2002), views culture as a significant factor influencing people's beliefs, attitudes, and behavior. Its impact can be measured by how individuals are motivated to respond to their cultural environment. They define culture as an organized group of people who share common goals, beliefs, and values, and its influence on motivation can be assessed.

The organizational culture of schools is also related to teachers' work attitudes. Cheng's research (2022) shows that "teachers in stronger school cultures were more motivated. In environments with strong organizational ideology, shared ownership, charismatic leadership, and closeness, teachers experienced greater job satisfaction and productivity." Building a strong organizational culture in schools is crucial for achieving educational goals and improving the school environment. From these definitions, it can be concluded that school culture comprises the values, assumptions, attitudes, perceptions, customs, myths, educational policies, and norms of behavior that are established and manifested in the appearance, attitudes, and actions of the school community. This unique culture distinguishes one school from another.

2.2 School Quality

According to Hakiim et al. (2021), the quality of education refers to the products produced by educational institutions or schools. Schools, as formal educational institutions, must produce graduates with competent academic skills, abilities, attitudes, ways of thinking, and personalities, enabling students to be competitive after graduation (Sunaengsih et al., 2019). The quality of a school's teaching is reflected in the number of students with both academic and non-academic achievements, as well as high-quality graduates who meet the goals of educational institutions. A high-quality school can be identified by the following indicators: first, a large number of students, indicating high community enthusiasm for the institution; second, achievements in both academic and non-academic areas; and third, qualified graduates who meet the standards set by the school. Quality improvement focuses on achievable goals, processes, and related factors, encompassing both the quality of results and the processes to achieve them.

Hasnadi (2021) posits that Total Quality Management (TQM) is customer-focused, particularly on graduate users, and is a key to success in educational management. TQM in school management aims to provide education that aligns with societal developments, demands, and dynamics. Implementing TQM in educational institutions involves the responsibility of all school members for the quality of teaching, engaging school committees, principals, administrative managers, teachers, and students in the academic process and understanding achievable educational goals. This theory

highlights that school quality involves academic, social, and moral skills, determined by school culture, teaching and learning processes, and school reality. School culture encompasses values, customs, ceremonies, slogans, and behavioral patterns that are consciously or unconsciously passed from one generation to another.

Based on these perspectives, quality is defined as the degree of excellence of a product, whether in the form of goods or services, material or immaterial. Generally, quality refers to the overall characteristics of goods or services that indicate their ability to satisfy anticipated needs. In education, the concept of quality includes the input, process, and output of education. Schools, as learning environments for all students, function as input-process-output systems responsible for the context and outcomes of education.

3.   Methodology

This research adopts a quantitative approach. According to Sugiyono (2014), the quantitative method is defined as a research method based on a specific sample philosophy, where data collection uses research instruments and data analysis is quantitative/statistical in nature. The purpose is to describe and test predetermined hypotheses. Quantitative research is suitable for examining specific populations or samples, utilizing research instruments for data collection, and employing quantitative/statistical data analysis to test established hypotheses.

The type of research employed in this study is correlational research. According to Suharsimi (2006), correlational research is conducted to determine the level of relationship between two or more variables without altering, adding, or manipulating the existing data. Levitt (2021) defines the population as a generalization area consisting of objects or subjects with specific quantities and characteristics determined by researchers for study, leading to conclusions. The population in this study comprises elementary school teachers in the Pattimura cluster, Dawe sub-district, Kudus district, totaling 5 schools with a population of 50 teachers.

Sugiyono (2014) also states that the sample is a subset of the population, possessing the same characteristics. Therefore, samples taken from the population must be truly representative. Sampling in this study uses a proportional random sampling technique. According to Cheung (2021), proportional random sampling is a technique where all members have an equal chance of being sampled according to their proportions. This method was chosen because it ensures that every member of the population has an equal opportunity to be selected, is easy to implement, and does not require extensive theoretical background. Additionally, proportional sampling techniques ensure that the sample is representative, with the number of samples determined proportionally to the number of subjects in each region

Data collection instruments are tools selected and used by researchers to systematically and efficiently gather data. Instruments can include questionnaires, checklists, scales, interview guides, observation sheets, tests, and documentation. In this study, a questionnaire method was used to gather data on school quality. The research instrument was a questionnaire designed according to Marshall (2005), who describes a questionnaire as a data collection technique involving a set of questions or written statements given to respondents to answer. The questionnaire in this study was structured using a Likert scale with 5 alternative answers for each question. Table 1 shows the grid of school quality variable instruments.

Table 1. Grid of school quality variable instruments (Y)

No	Indicator	Item	Total
1	Quality of graduates	1-11	11
2	Learning process	12-17	6
3	Quality of teachers	18-27	10
4	Quality of graduates	28-40	13
	Total		40

Table 2 outlines various indicators of managerial competencies for school principals and the specific items that measure these competencies. The table categorizes the competencies into four broad areas: Planning, Organizing, Actuating, and Controlling. Each category contains specific indicators that describe the ability or skill expected from the school principals. The number of items associated with each indicator shows the questions or statements used to assess that particular competency. The total number of items for each category and the overall total give an idea of the scope and coverage of the competency assessment.

Table 2. Instrument lattice of principal managerial competency variables (X1)

No	Indicator	Item	Total
1	*Planning*	1,2,3,4	4
	Able to compile a school development plan		
2	*Oranizing*		
	Able to optimally empower human resources	5,6,7	3
	Able to manage and empower infrastructure facilities	8,9	2

	optimally		
3	*Actuating*		
	Able to empower school relations with the community	10,11,12	3
	Able to manage students	13,14,15,16	4
	Able to manage curriculum development	17,18,19,20	4
	Able to manage school finances	21,22	2
	Able to manage school administration	23,24	2
4	*Controlling*	25,26,27	3
	Able to develop a monitoring and evaluation system		
	Able to carry out school supervision	28,29,30	3
	Total		30

Table 3 shows the outlines various indicators of school culture and the specific items that measure these indicators. The table categorizes the school culture into six broad indicators. Each indicator describes a specific aspect of school culture that is being measured. The number of items associated with each indicator shows the questions or statements used to assess that particular aspect of school culture. The total number of items for each indicator and the overall total give an idea of the scope and coverage of the culture assessment.

Table 3. School culture variable instrument grid (X_2)

No	Indicator	Item	Total
1	There is an orderly way of acting from all members of the school that can be observed	1,2,3,4	4
2	There are norms that contain standards of behavior from school members	5,6,7,8,9,10	6
3	Values and belief in achievement school quality	11,12,13,14,15,16,17	7
4	There is confidence from all members organization that students must be the focus of all activities in schools, meaning that all inputs and processes deployed in schools are primarily aimed at improving quality and satisfaction	18,19,20,21	4
5	There are terms and rules of the game binding on all members of the organization	22,23,24,25,26	5
6	There is an organizational climate	27,28,29,30	4
	Total		30

4. Results and Discussion

The following are the results of the study on the influence of principal managerial competence and school culture on school quality in elementary schools in Gugus Pattimura, Dawe District, Kudus Regency. The perceptions of the managerial competence of school principals were gathered from 33 teacher respondents using SPSS version 16 for data analysis. The highest score recorded was 150, and the lowest score was 115. The range of interval values can be determined as follows.

$$Range = \frac{Score\ \max - Score\ min}{Category} \quad (1)$$
$$= \frac{150 - 115}{5}$$
$$= \frac{35}{5}$$
$$= 7$$

The results of the descriptive analysis of the principal's managerial competency variable on school quality are as follows: the highest score was 150, the lowest score was 115, the mean was 131.70, the median was 132.00, the mode was 123, and the standard deviation was 10.827. These results were based on the responses of 33 respondents to 30 questions. Regarding respondents' perceptions, most respondents indicated that the managerial competence of school principals was in the very high category, with 2 respondents (6%). Conversely, a small number of respondents rated the managerial competence of school principals as very low, with 7 respondents (21.2%). The total average score, as shown in Table 4, is 131.70, placing it in the medium category.

Table 4. Respondent perceptions of variable X1

No	Interval	Absolute frequency	Relative frequency	Category
1	115 – 121	7	21.2%	Very low
2	122 – 129	5	15.2%	Low
3	130 – 136	12	36.4%	Medium
4	137 – 143	7	21.2%	High
5	144 – 150	2	6.0%	Very high
	Total	33	100%	

Respondents' perceptions of school culture from r 33 teacher respondents with the help of SPSS version 16. Based on the results of data collection as a whole, the highest score was 150, the lowest score was 103, so the range interval values can be determined as follows.

$$Range = \frac{Score\max - Score\min}{Category} \qquad (2)$$
$$= \frac{150 - 103}{5}$$
$$= \frac{47}{5}$$
$$= 9.4\ (9)$$

Table 5 shows that there are 5 categories of respondents' perceptions of school culture. The frequency of respondents answering the very low category was 2 respondents or 6.1%, the low category was 3 respondents or 9.1%, the medium category was 4 respondents or 21.1%, the high category was 14 respondents or 42.4% and the very high as many as 10 respondents or 30.3%. Based on descriptive data, the average respondent is 133.82, included in the high category. Tabulation is a way to present both quantitative and qualitative data visually. Findings from all studies were collated under the three revised questions used in data extraction.

Table 5. Respondents' perceptions of variable X2

No	Interval	Absolute frequency	Relative frequency	Category
1	103-111	2	6.1 %	Very low
2	112-120	3	9.1 %	Low
3	121-130	4	12.1 %	Medium
4	131-140	14	42.4 %	High
5	141-150	10	30.3%	Very high
	Total	33	100%	

The results of the research using statistical tests show that the research hypothesis has proven that there is an effect of the managerial competence of school principals and school culture on school quality. This is evidenced by the simultaneous test (F test) which shows the value of Fcount = 158,233> Ftable = 4,14 with a significance level of probability 0.000 <0.05 or sig = 0.000 = 0% <5% means reject H0 and accept Ha. So, it can be concluded that the managerial competency variables of school principals (X1) and school culture (X2) have a significant effect on school quality variables (Y). Based on the results of this study, the research hypothesis which states that there is a positive and significant effect of the managerial competence of school principals and school culture on school quality in the Gugus Pattimura elementary school, Dawe District, Kudus Regency is accepted (proven).

Table 6. ANOVA test

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5047.400	2	2523.700	158.233	.000[a]
	Residual	478.479	30	15.949		
	Total	5525.879	32			

a. Predictors: (Constant), Principal Managerial Competence, School Culture

b. Dependent Variable: School Quality

There is a relationship or correlation of 0.956 and the influence of the principal's managerial competency variable and school culture variables on school quality variables is 91.3% and the remaining 18.7% is influenced by other variables. Many factors affect the quality of schools, namely: 1) the effectiveness of the leadership of the principal, 2) teachers, staff and other employees in the school environment, 3) teaching and learning process, 4) human resource development, 5) curriculum, 6) vision and clear mission and strategy, 7) A conducive school climate, 8) a thorough assessment of the strengths and weaknesses of the school, 9) effective communication internally and externally, 10) involvement of parents and the community. In this study, the role of parents and the community was most dominant, which was represented by the school committee, the leadership of the principal and the teacher.

Table 7. Tabel summary variable X_1 dan X_2 of variable Y

Model	R	R Square	Adjusted R Square	Std. Error
1	.956[a]	.913	.908	3.994

a. Predictors: (Constant), Principal Managerial Competence, School Culture
b. Dependent Variable: School Quality

5.   Conclusion

Based on the research findings regarding the influence of the school committee's role, principal leadership, and teacher competence on the quality of Gugus Pattimura Elementary School, Dawe District, Kudus Regency, it can be conclude that the study shows a positive and significant effect of the principal's managerial competence on school quality. The principal's ability to manage effectively correlates with improved school quality. The weakest area identified is organization, indicating a need for better internal and external organizational practices. Also, there is a positive and significant influence of school culture on school quality. A strong school culture enhances the overall quality of the school. The weakest aspect of school culture is the regularity of behavior, suggesting that consistent behavioral standards need reinforcement. Both the managerial competence of the principal and school culture collectively have a positive and significant impact on school quality. Effective leadership and a positive school culture are crucial for achieving high-quality education.

Acknowledgement

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