



An Integrative Model of School Quality Management through Teacher Professional Development to Improve the Quality of Continuing Education

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ABSTRACT

This study aims to develop and test an integrative model of school quality management and teacher professional development in improving the quality of continuing education at the elementary school level, with school quality culture as a mediating variable. The approach used is a quantitative explanatory approach with Structural Equation Modeling analysis techniques based on Partial Least Square (SEM-PLS) using SmartPLS 4.0. The study population was 145 teachers in five elementary schools in Medan City, namely SD Negeri 060895, SD Negeri 064008, SD Negeri 067690, SD Muhammadiyah 04, and SD Swasta Al-Azhar, with a sample of 108 teachers determined through proportionate stratified random sampling based on the Slovin formula. Data were collected through a five-point Likert scale questionnaire that has been tested for validity and reliability. The results of the study indicate that school quality management and teacher professional development have a positive and significant effect on school quality culture and the quality of continuing education, both directly and through the mediation of school quality culture, with an R² value of 0.612 for school quality culture and 0.671 for the quality of continuing education. This finding implies that improving the quality of continuing education in elementary schools needs to be done simultaneously through strengthening the quality management system, ongoing teacher professional development programs, and strengthening the quality culture as a strategic bridge between the two.

INTRODUCTION

Quality plays an important role in human life, both individually and in social, national, and state life. According to the Regulation of the Minister of National Education Number 63 of 2009 Article 1 paragraph (1), the quality of education is the level of intelligence of the nation's life achieved through the National Education System (Nasution & Rizkina, 2025). This provision emphasizes that the quality of education is not merely an administrative achievement, but rather a reflection of how far a nation is able to prepare the next generation who are intelligent, have character, and are competitive. At the level of educational units, this quality is not realized instantly, but is the result of a planned, measurable, and sustainable managerial process, which involves all school resources, including the leadership of the principal, the internal quality assurance system, facilities and infrastructure, and most importantly the quality of teachers as the spearhead of the learning process.

Elementary schools (SD), as the first level of formal education, play a strategic role in laying the foundation for students' literacy, numeracy, and character development. However, various studies indicate that the quality of education at the elementary school level in Indonesia still faces a number of fundamental issues, ranging from disparities in quality between schools, limited teacher professional competency, and weak implementation of school-based quality management systems. This condition is also reflected in the results of teacher quality evaluations in developing countries, which indicate that improving teacher competency remains a structural challenge in efforts to continuously improve education quality (Fauzi et al., 2021). Principal leadership, teacher professionalism, and community participation are three main pillars that are intertwined in driving improvements in the quality of education in schools (Abdullah, 2018). Effective leadership not only influences school culture but also motivates educators and increases student engagement in the learning process (Akbar et al., 2022; Maulida et al., 2024).

Quality management in education is a strategic approach to improving the overall quality of an institution, including enhancing teacher professionalism (Handayani & Firmansyah, 2024). The implementation of quality management systems, such as school self-evaluation, internal quality assurance systems, and data-driven decision-making, has been shown to have a significant impact on improving teacher performance and professional ethos, as it encourages teachers to continuously improve their capacity through training, performance reflection, collaboration, and innovation in teaching (Handayani & Firmansyah, 2024). The role of stakeholders, including school supervisors, school committees, and education offices, also makes a significant contribution to boosting teacher professional performance through continuous development (Harsono, 2023). Synergy between schools and the community also serves as a driving factor in strengthening teacher professionalism, particularly in the context of meeting resource needs and providing social support for quality improvement programs (Indriani & Sulaiman, 2022).

On the other hand, teacher professional development cannot be viewed as an incidental activity, but must be carried out continuously and adapted to the

actual needs of teachers in the field. Regulation of the Minister of Administrative and Bureaucratic Reform Number 1 of 2023 emphasizes that teacher competency development must be consistent and in accordance with the interests and functional duties of teachers in an integrated learning system, so that teacher professionalism remains maintained and relevant to the demands of the times. Commonly applied professional development models include involvement in conferences, workshops, seminars, learning communities (KKG), peer observation, scientific writing, and classroom action research, which collectively help teachers innovate in planning, managing, and implementing the learning process, thus positively impacting the quality of education and student development. The Continuing Professional Development Program (PKB) for elementary school teachers, as previously accompanied in the Deli Tua area directly adjacent to Medan City, shows that structured mentoring can significantly increase teacher professional capacity (Nasution, 2015). The policy of continuous teacher professional development has also proven effective when supported by regional regulations and the commitment of school principals, as found in history teachers at public high schools in Padang City (Hardi et al., 2024).

The problem is, most previous studies tend to examine school quality management and teacher professional development as two independent variables, or place one of them as the dominant variable without explaining the mechanism of their relationship within a complete model framework. In fact, sustainable education quality can only be achieved if school quality management and teacher professional development run simultaneously and integrated, bridged by a culture of quality that grows within the school environment (Fitria et al., 2025; Hasra et al., 2024). This gap is a relevant research gap to be studied, especially at the elementary school level, which has so far received less attention than secondary schools in quality management studies based on statistical modeling.

Medan, Indonesia's third-largest city, has a highly diverse range of elementary schools, both in terms of status (public and private), accreditation, and teacher resources. This diversity makes Medan a representative location for testing an integrative model linking school quality management, teacher professional development, school quality culture, and the quality of continuing education. Improving the quality of education in Indonesia is also inseparable from the global commitment to realizing the Sustainable Development Goals (SDGs), particularly Goal 4 on quality education, which demands inclusive, equitable, and sustainable education for all students (Ratnasari & Nugraheni, 2024).

Empirically, the challenges of education quality in Medan are also evident in the variation in accreditation results among elementary schools, both public and private. This indicates that managerial capacity and teacher resources are not yet fully equitable. Some schools have implemented an institutionalized internal quality assurance system, while others still rely on routine administrative approaches without structured evaluation and continuous improvement. This

situation is further complicated by budget constraints, teacher administrative burdens, and the lack of incentives for teachers to actively engage in professional development activities outside of routine teaching duties. However, poorly managed workload constraints can impact teachers' work-life balance, which in turn impacts their professionalism and the quality of learning outcomes (Ma'wa et al., 2024).

This phenomenon emphasizes the need for a model that is not only descriptive but also empirically testable to prove the mechanism of the relationship between school quality management, teacher professional development, and sustainable education quality. The Structural Equation Modeling (SEM) approach is considered appropriate for this purpose because it is able to simultaneously test the relationship between several latent variables that influence each other, including testing the role of mediating variables that explain the indirect mechanisms between these variables (Ghozali, 2017). The use of SEM in educational research has also shown a significant trend of increasing publications in the last decade, indicating the increasing recognition of the power of this method in uncovering complex causal relationships in the field of educational management.

Based on this background, this study aims to: (1) analyze the influence of school quality management on school quality culture; (2) analyze the influence of teacher professional development on school quality culture; (3) analyze the influence of school quality management on the quality of continuing education; (4) analyze the influence of teacher professional development on the quality of continuing education; (5) analyze the influence of school quality culture on the quality of continuing education; and (6) test the mediating role of school quality culture in the relationship between school quality management and teacher professional development on the quality of continuing education in five elementary schools in Medan City. The novelty of this study lies in the preparation of an integrative model that combines four constructs simultaneously in one structural framework that is tested empirically using the SEM-PLS approach, an approach that is rarely applied in the context of elementary school quality management in urban areas of North Sumatra.

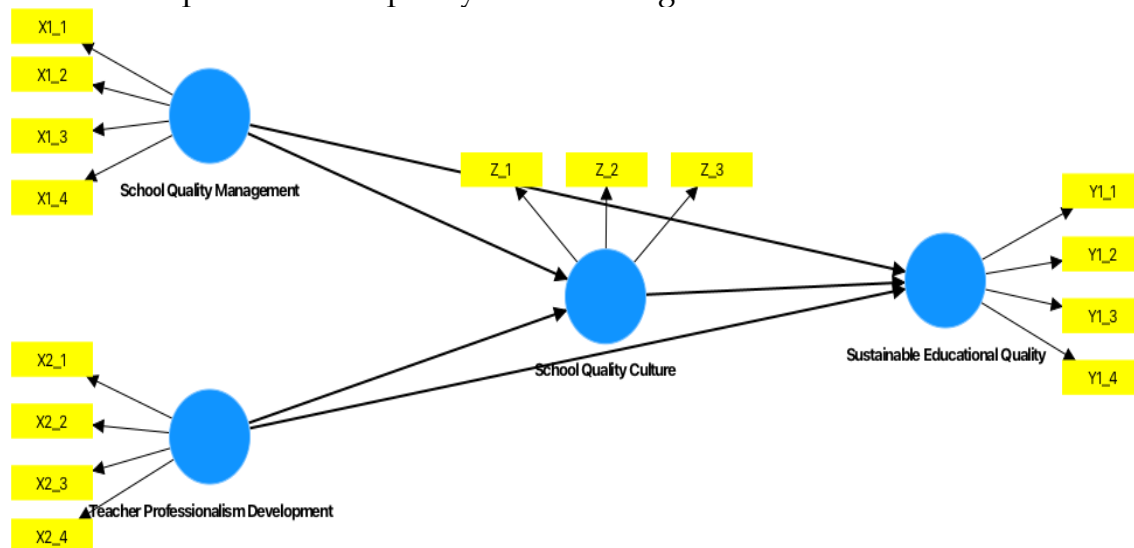
IMPLEMENTATION AND METHODS

Based on the theoretical review above, this study formulates seven hypotheses as follows:

- H1: School quality management has a positive and significant influence on school quality culture.
- H2: Teacher professional development has a positive and significant impact on school quality culture.
- H3: School quality management has a positive and significant impact on the quality of continuing education.
- H4: Teacher professional development has a positive and significant impact on the quality of continuing education.
- H5: School quality culture has a positive and significant influence on the quality of continuing education.

H6: School quality culture mediates the influence of school quality management on the quality of continuing education.

H7: School quality culture mediates the influence of teacher professional development on the quality of continuing education



Picture 1. Conceptual Framework

Research Design and Approach

This study uses a quantitative approach with an associative explanatory design to test the causal relationship between latent variables. The data analysis technique used is Structural Equation Modeling based on Partial Least Square (SEM-PLS) with the help of SmartPLS 4.0 software. The SEM-PLS approach was chosen because it is able to analyze complex relationships between observable variables and latent variables that cannot be measured directly, and is suitable for research with the aim of developing models and predictions (Ghozali, 2017; Hamid & Anwar, 2019). This approach has also been widely used in studies of education quality based on National Education Standards, including to map the pattern of relationships between quality standards at the school level (Anam et al., 2020), as well as in the context of student satisfaction and loyalty in higher education (Appuhamilage & Torii, 2019).

Population, Sample, and Research Location

The population of this study was all teachers at five elementary schools in Medan City, selected purposively by considering the diversity of status (public and private), sub-district area, and accreditation level, namely Public Elementary School 060895 Medan (Medan Baru District), Public Elementary School 064008 Medan (Medan Denai District), Public Elementary School 067690 Medan (Medan Tembung District), Muhammadiyah 04 Medan Elementary School, and Al-Azhar Medan Private Elementary School. The total population of teachers in the five schools was 145 people. The sample size was determined using the Slovin formula with a 5% error rate, resulting in a minimum sample size of 107 respondents, which was then rounded up to 108 respondents. The sampling technique used proportionate stratified random sampling so that the number of respondents from each school was proportional to the total teacher population at

that school. Details of the population and sample of the study are presented in Table 1.

Table 1. Profile and Distribution of Elementary School Samples in Medan City

No	School name	Status	Accreditation	Teacher Population	Teacher Sample
1	State Elementary School 060895 Medan	Country	A	28	21
2	State Elementary School 064008 Medan	Country	A	25	19
3	State Elementary School 067690 Medan	Country	B	22	16
4	Muhammadiyah 04 Elementary School Medan	Private	A	30	22
5	Al-Azhar Private Elementary School Medan	Private	A	40	30
	Amount			145	108

Variables and Operational Definitions

This study involved four latent variables, namely School Quality Management (X1) and Teacher Professional Development (X2) as exogenous variables, School Quality Culture (Z) as a mediating variable, and Continuing Education Quality (Y) as an endogenous variable. The operational definitions and indicators of each variable are presented in Table 2.

Table 2. Research Variables, Dimensions, and Indicators

Variables	Dimensions	Indicator	Reference Source
School Quality Management (X1)	Planning, control and quality improvement	Quality planning (MM1); Internal quality assurance (MM2); Continuous improvement (MM3); Principal quality leadership (MM4)	Sallis (2002); Minister of National Education Regulation No. 63/2009; Handayani & Firmansyah (2024)
Teacher Professional Development (X2)	Teacher competence and self-development	Training/workshop (PG1); Learning community/KKG (PG2); Classroom action research (PG3); Academic supervision (PG4)	Nasution (2015); Al Mubarak et al. (2021); Hardi et al. (2024)

School Quality Culture (Z)	Quality-oriented work values and climate	Collective commitment (BM1); Collaboration among school members (BM2); Continuous improvement orientation (BM3)	Fitria et al. (2025); Hasra et al. (2024)
Quality of Continuing Education (Y)	Quality achievement and sustainability	Student competency achievement (MB1); Equitable access (MB2); Resource efficiency (MB3); Sustainability of quality programs (MB4)	Minister of National Education Regulation No. 63/2009; Ratnasari & Nugraheni (2024)

Data Collection Instruments and Techniques

Primary data were collected using a closed-ended questionnaire with a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The instrument was developed based on the indicators in Table 2 and underwent content validity testing by experts (expert judgment) and a pilot study with 30 teachers outside the research sample. The pilot test results indicated that all instrument items were valid (calculated r value > table r value) and reliable (Cronbach's Alpha value > 0.70). Secondary data were obtained from school profile documents, basic education data (Dapodik), and school accreditation results.

Data Analysis Techniques

Data analysis was carried out in two stages as is customary in the SEM-PLS procedure, namely evaluation of the measurement model (outer model) and evaluation of the structural model (inner model). model) (Ghozali, 2017). The outer model evaluation was conducted through convergent validity testing (loading factor > 0.70 and Average Variance Extracted/ AVE > 0.50), discriminant validity testing (Fornell-Larcker criteria and cross loading), and reliability testing (Composite Reliability > 0.70 and Cronbach's Alpha > 0.70). The inner model evaluation was conducted through the coefficient of determination (R^2), predictive relevance (Q^2), effect size (f^2), and hypothesis testing using a bootstrapping procedure with resampling of 5,000 subsamples to obtain t -statistics and p -values at a significance level of 5%. Testing the mediating effect of school quality culture was conducted by analyzing the indirect effect using the Variance Accounted For (VAF) method, as commonly applied in educational SEM studies (Anam et al., 2020; Appuhamilage & Torii, 2019).

RESEARCH RESULT

Description of Research Object

The five elementary schools that served as the research locus have diverse managerial characteristics. State Elementary School 060895 Medan, located in Medan Baru District, is a public school with A accreditation that has implemented a scheduled internal quality assurance system through monthly

evaluation meetings and classroom supervision by the principal. State Elementary School 064008 Medan in Medan Denai District has relatively heterogeneous student characteristics in terms of socioeconomic background, so that quality management emphasizes equal access and additional learning assistance. State Elementary School 067690 Medan in Medan Tembung District, with B accreditation, faces the challenge of limited learning support facilities but demonstrates a high commitment of teachers in participating in independent self-development programs. Muhammadiyah Elementary School 04 Medan, as a religious-based private school, integrates teacher professional development programs with strengthening Islamic values in learning, while Al-Azhar Private Elementary School Medan has the most institutionalized quality management system among the five sample schools, supported by regularly scheduled teacher training programs every semester and a teacher performance evaluation system integrated with the central foundation.

The diversity of characteristics of the five schools means that the research data has sufficient variation to test the robustness of the integrative model developed, both in schools with established quality management systems and schools that are still in the development stage of their internal quality assurance systems.

Respondent Characteristics

The study respondents consisted of 108 teachers spread across five elementary schools in Medan City. Based on gender, the majority of respondents were female (76.9%) and the remainder male (23.1%), in line with the general composition of educators at the elementary school level in Indonesia. Based on educational level, the majority of respondents had a Bachelor's degree (S1) in Elementary School Teacher Education (81.5%), followed by a Master's degree (S2) at 9.3%, and a Diploma at 9.2%. Based on length of service, the majority of respondents had worked for 6 to 15 years (48.1%), indicating that most teachers are in a mature career development phase to be actively involved in ongoing professional development programs.

As an initial illustration before conducting a comprehensive SEM-PLS analysis, the following table presents the average scores of teacher perceptions of the four research variables in each sample school, which shows the variation in achievement between schools and also serves as a basis for further analysis of the relationship between variables.

Table 3. Average Teacher Perception Score per School (Scale 1-5)

School	School Quality Management (X1)	Teacher Professional Development (X2)	School Quality Culture (Z)	Quality of Continuing Education (Y)
State Elementary School 060895 Medan	4.12	3.98	4.05	4.01
State Elementary School 064008 Medan	3.87	3.91	3.84	3.80

State Elementary School 067690 Medan	3.65	3.72	3.60	3.58
Muhammadiyah 04 Elementary School Medan	4.20	4.15	4.18	4.10
Al-Azhar Private Elementary School Medan	4.45	4.32	4.40	4.38
Overall Average	4.06	4.02	4.01	3.97

The table above shows that Al-Azhar Medan Private Elementary School has the highest score across all research variables, in line with its most institutionalized quality management and teacher development system among the five sample schools, while Medan Public Elementary School 067690 shows the lowest relative score, in line with its limited supporting facilities and B accreditation. This pattern provides an initial indication that is consistent with the results of the hypothesis testing in the structural model presented in the next section.

Evaluation of Measurement Model (Outer Model)

The convergent validity test showed that all indicators in the four latent variables had loading factor values above 0.70 and Average Variance Extracted (AVE) values above 0.50, thus all indicators were declared convergently valid. The reliability test showed that the Composite Reliability and Cronbach's Alpha values for all variables were above 0.70, indicating that the research instrument had good internal consistency. A summary of the validity and reliability test results is presented in Table 4.

Table 4. Results of Convergent Validity and Reliability Tests

Variables	Indicator	Loading Factor	AVE	Composite Reliability	Cronbach's Alpha
School Quality Management (X1)	MM1	0.812	0.647	0.918	0.887
	MM2	0.784			
	MM3	0.851			
	MM4	0.763			
Teacher Professional Development (X2)	PG1	0.791	0.628	0.911	0.874
	PG2	0.833			
	PG3	0.802			
	PG4	0.741			
School Quality Culture (Z)	BM1	0.842	0.652	0.848	0.798
	BM2	0.804			
	BM3	0.771			
Quality of Continuing Education (Y)	MB1	0.821	0.674	0.892	0.862
	MB2	0.859			
	MB3	0.793			
	MB4	0.812			

The discriminant validity test using the Fornell-Larcker criteria shows that the square root value of AVE (diagonal numbers in Table 5) for each variable is greater than the correlation value between latent variables, so that all variables are declared discriminantly valid.

Table 5. Results of the Discriminant Validity Test (Fornell-Larcker Criteria)

Variables	X1	X2	Z	Y
School Quality Management (X1)	0.804			
Teacher Professional Development (X2)	0.312	0.792		
School Quality Culture (Z)	0.512	0.487	0.807	
Quality of Continuing Education (Y)	0.498	0.452	0.560	0.821

Structural Model Evaluation (Inner Model)

The structural model evaluation was conducted by examining the coefficient of determination (R²) and predictive relevance (Q²). The test results showed that the R² value for the School Quality Culture variable was 0.612, meaning that 61.2% of the variation in school quality culture can be explained by school quality management and teacher professional development, while the remainder is explained by other variables outside the model. The R² value for the Continuing Education Quality variable was 0.671, meaning that 67.1% of the variation in the quality of continuing education can be explained by school quality management, teacher professional development, and school quality culture simultaneously. Both R² values are classified as strong (substantial) according to Ghazali's (2017) criteria. The Q² values for the two endogenous variables were 0.398 and 0.447, respectively, meaning that this research model has good predictive relevance.

Table 6. R-Square and Q-Square Values

Endogenous Variables	R-Square	Category	Q-Square	Category
School Quality Culture (Z)	0.612	Strong	0.398	Good
Quality of Continuing Education (Y)	0.671	Strong	0.447	Good

Hypothesis Testing

Hypothesis testing was conducted through a bootstrapping procedure with 5,000 resamples to obtain path coefficients, t-statistics, and p-values. The hypothesis was accepted if the t-statistic value was > 1.96 and the p-value was < 0.05. The results of the direct effect hypothesis testing are presented in Table 7, while the results of the mediation effect testing (indirect effect) are presented in Table 8.

Table 7. Results of Direct Effect Hypothesis Testing

Hypothesis	Track	Path Coefficient	t-Statistic	p-Value	Information
H1	School Quality Management → School Quality Culture	0.432	6,812	0,000	Significant (Accepted)
H2	Teacher Professional Development → School Quality Culture	0.398	5,941	0,000	Significant (Accepted)
H3	School Quality Management → Continuing Education Quality	0.286	3,517	0,000	Significant (Accepted)
H4	Teacher Professional Development → Quality of Continuing Education	0.241	2,984	0.003	Significant (Accepted)
H5	School Quality Culture → Continuing Education Quality	0.447	6,203	0,000	Significant (Accepted)

Table 8. Results of the Mediation Effect Test (Indirect Effect)

Hypothesis	Mediation Path	Indirect Coefficient	t-Statistic	p-Value	VAF	Information
H6	School Quality Management → School Quality Culture →	0.193	3,812	0,000	40.3 %	Partial Mediation (Accepted)

	Continuing Education Quality					
H7	Teacher Professional Development → School Quality Culture → Continuing Education Quality	0.178	3,245	0.001	42.5 %	Partial Mediation (Accepted)

Based on Table 7 and Table 8, all hypotheses proposed in this study (H1 to H7) are declared accepted. The Variance Accounted For (VAF) values in H6 and H7 are in the range of 20%-80%, which indicates that school quality culture acts as a partial mediator, not a full mediator, because school quality management and teacher professional development still have a significant direct influence on the quality of continuing education even though school quality culture is controlled.

DISCUSSION

The results of the H1 test indicate that school quality management has a positive and significant effect on school quality culture (path coefficient 0.432; $p < 0.01$). This finding reinforces the view that the implementation of quality management systems, such as school self-evaluation, internal quality assurance systems, and data-based decision-making, can encourage the growth of a quality-oriented work ethic and culture within the school environment (Handayani & Firmansyah, 2024). The five sample schools show that schools with a more structured internal quality assurance system, such as Al-Azhar Private Elementary School Medan and Muhammadiyah 04 Elementary School Medan, which have A accreditation and a tiered supervision system, tend to have higher quality culture scores than schools with quality assurance systems that have not been optimally institutionalized.

The results of the H2 test indicate that teacher professional development also has a positive and significant effect on school quality culture (path coefficient 0.398; $p < 0.01$). This finding is in line with the results of the Continuous Professional Development mentoring for elementary school teachers in the Deli Tua area bordering Medan City, which showed that structured mentoring can improve teacher professional capacity while fostering a collaborative work climate (Nasution, 2015). Teachers who are active in Teacher Working Groups (KKG), training, and classroom action research tend to be more open to change and more easily internalize quality values into daily learning practices.

The results of testing H3 and H4 indicate that school quality management (coefficient 0.286; $p < 0.01$) and teacher professional development (coefficient 0.241; $p < 0.01$) each have a positive and significant direct effect on the quality of continuing education. This finding is consistent with the concept that educational

quality management is an integrated process that focuses not only on results but also on continuous improvement of academic management, learning quality, and the supervision system (Ratnasari & Nugraheni, 2024). However, the smaller magnitude of the direct effect coefficient compared to the indirect effect through school quality culture (Table 7) indicates that the impact of school quality management and teacher professional development on the quality of continuing education will be more optimal if it is first internalized into a collective work culture, rather than simply an administrative policy.

The results of the H5 test indicate that school quality culture has the greatest influence on the quality of continuing education (path coefficient 0.447; $p < 0.01$) compared to other exogenous variables. This finding emphasizes the importance of servant leadership-based principal leadership in fostering a supportive work climate and a culture of quality, as principals who serve tend to be able to create an environment that encourages collaboration and collective commitment from all school members towards quality improvement (Hasra et al., 2024). Properly managed school quality management innovation has also been shown to improve teacher professionalism while fostering a work culture that is results-oriented and sustainable (Fitria et al., 2025).

The results of H6 and H7 tests confirm that school quality culture acts as a partial mediator in the relationship between school quality management and teacher professional development on the quality of continuing education. This finding is the main theoretical contribution of this study, because so far most previous studies have tended to place school quality management and teacher professionalism as stand-alone variables without explaining the mechanism of the relationship between the two through school quality culture as a strategic bridge. The integrative model produced in this study confirms that improving the quality of continuing education at the elementary school level requires a simultaneous approach involving strengthening the managerial system, developing teacher capacity, and establishing a quality culture as an inseparable whole.

From an educational sustainability perspective, these findings are also relevant to the fourth global Sustainable Development Goal, which calls for quality, inclusive, and equitable education (Ratnasari & Nugraheni, 2024). Practical implications: The education office and school principals in Medan City need to design policies that focus not only on meeting administrative quality management standards but also on strengthening ongoing teacher professional development programs and fostering a culture of quality as a long-term foundation for sustainable education quality in elementary schools.

Overall, the findings of this study strengthen the argument that improving the quality of education at the elementary school level cannot be achieved through a single intervention, but rather requires a systemic approach that integrates managerial aspects, teacher capacity development, and the formation of school organizational culture. The integrative model, which has proven significant in five elementary schools in Medan City, provides additional empirical evidence for the study of educational quality management in

Indonesia, especially at the elementary education level, which has so far been relatively less studied using a structural modeling approach compared to secondary and higher education levels.

Managerial Implications

The findings of this study provide several managerial implications that can be adopted by principals, supervisors, and the education office. First, strengthening school quality management should not only be oriented towards fulfilling accreditation documents, but also on developing a sustainable school self-evaluation mechanism based on real learning data. Second, teacher professional development programs need to be designed in a differentiated manner according to the needs and career stages of teachers, considering that teachers at different service periods have different development needs. Third, considering the significant role of school quality culture as a mediator, principals need to deliberately design collaborative rituals and forums, such as weekly reflection meetings, best practice sharing sessions, and recognition of teacher achievements, as instruments for fostering a sustainable quality culture. Fourth, the Medan City Education Office can use this integrative model as a reference in developing more targeted and evidence-based elementary school development policies, particularly in allocating teacher training programs and school quality management assistance proportionally to the needs of each school.

Research Limitations

This study has several limitations that need to be frankly stated. First, the sample size was limited to five elementary schools in Medan City, so generalizing the results to elementary schools in other areas, particularly rural areas or those with different socio-economic characteristics, requires caution. Second, the research data were collected through a perceptual questionnaire completed by teachers, thus creating the possibility of common method bias, despite rigorous validity and reliability testing. Third, this research model only involved four main latent variables, so it is possible that other variables outside the model, such as parental support, educational funding, and digitalization of school management, also influence the quality of continuing education but were not accommodated in this study. These limitations open up opportunities for further research to enrich and expand the developed integrative model.

CONCLUSION AND SUGGESTIONS

This study concludes that the integrative model linking school quality management, teacher professional development, school quality culture, and the quality of continuing education in five elementary schools in Medan City is proven to be statistically valid and reliable. All research hypotheses (H1-H7) are accepted, with the main finding that school quality culture acts as a partial mediator that strengthens the influence of school quality management and teacher professional development on the quality of continuing education. School quality management and teacher professional development are proven to have a significant influence both directly and indirectly on the quality of continuing

education, with school quality culture contributing the largest influence among all the variables studied.

Based on these findings, this study recommends several things. First, principals at the five sample schools and other elementary schools in Medan City are advised to strengthen their internal quality assurance systems in an institutionalized and data-driven manner. Second, the Medan City Education Office needs to promote a more structured and sustainable professional development program based on the real needs of teachers, including strengthening the role of the Teacher Working Group (KKG) as a forum for professional collaboration. Third, fostering a culture of school quality needs to be a strategic priority through servant leadership and strengthening communication and collaboration among school members. Fourth, further research is recommended to expand the sample coverage to other educational levels and consider additional variables such as parental support, digitalization of school management, and education financing to enrich the integrative model developed in this study.

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