

Managerial Competence and Work Motivation in Kindergarten Governance; A Critical Interpretation of Survey Evidence from West Lombok

MA Muazar Habibi

muazar.habibi@unram.ac.id

Mataram University: Universitas Mataram <https://orcid.org/0000-0001-8771-5583>

Jundu Muhammad Mufakkirul Islami¹

jundumuhammad@staff.unram.ac.id

Universitas Negeri Surabaya <https://orcid.org/0009-0009-1896-125X>

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Abstract

School-based management in early childhood education depends on leaders' capacity to organise institutional work and sustain engagement with teachers and families. This article critically examines aggregate findings from a survey of 36 kindergarten principals in West Lombok, Indonesia, previously reported by Habibi, Jaelani, and Amalia. We distinguish substantive associations from inconsistencies in statistical reporting and consider their implications for principal support. The available summaries include questionnaire reliability estimates, descriptive statistics, Pearson correlations, and regression coefficients. Managerial competence showed a positive but uncertain association with the reported management outcome ($r = .295$; approximate 95% confidence interval $-.037$ to $.568$; $p = .081$). Work motivation showed a larger positive association ($r = .488$; approximate 95% confidence interval $.190$ to $.704$; $p = .003$). The reported two-predictor model accounted for 26.0% of outcome variance. An algebraic check using the reported sample size and R^2 yielded an approximate $F(2, 33)$ of 5.797, rather than the incompatible value of 51.797 in the supplied manuscript. These calculations assess reporting coherence and do not constitute a reanalysis of participant records. The evidence supports further investigation of motivational conditions alongside managerial development, while providing no basis for causal claims or conclusions about children's outcomes. A humane approach to kindergarten governance should connect professional competence with realistic workloads, collegial support, and opportunities for shared learning. Transparent measurement and reproducible reporting remain necessary before stronger policy conclusions can be drawn.

1 Introduction

Delegating responsibility to schools creates a practical question for early childhood education: how can kindergarten leaders translate local decision-making authority into dependable educational provision? School-based management (SBM) assigns institutional responsibility for planning, organising resources, coordinating staff, and engaging stakeholders. Yet authority alone does not establish that these activities are carried out consistently or that they respond to the needs of teachers, children, and families. The relationship between leaders' professional capacities and their willingness to sustain this work therefore deserves careful examination.

In kindergarten settings, management decisions shape the conditions surrounding everyday teaching and care. Decisions about staff coordination, learning resources, communication, and administrative priorities can either support teachers' professional judgement or add to their workload. This is the educational significance of studying governance at this level. It does not imply that a questionnaire score for management quality directly measures children's wellbeing or learning. Those outcomes require separate evidence.

Indonesian research has situated SBM within relationships among leadership, teacher performance, political context, and school effectiveness. Ulfatin et al. (2022) examined these relationships in secondary schools in a marginal district, showing why school-level governance should be interpreted

within its institutional setting. Widiastuty et al. (2022) also investigated principal leadership in SBM implementation. These studies offer a relevant governance context, although their findings cannot simply be transferred to kindergarten institutions with different responsibilities and patterns of interaction.

Managerial competence and work motivation represent related but distinct dimensions of principalship. Competence concerns the capacity to organise and coordinate institutional activity. Motivation concerns engagement with that activity and the effort devoted to sustaining it. A leader may have substantial administrative knowledge while facing working conditions that make consistent implementation difficult. Conversely, enthusiasm may be constrained by limited access to expertise or resources. Treating either dimension as a complete explanation of management quality risks overlooking how leaders work within their institutions.

The West Lombok survey reported by Habibi et al. (2026) provides a small body of local evidence on these relationships. Its principal findings also appear in the manuscript examined here: 36 respondents, a managerial-competence correlation of .295, a work-motivation correlation of .488, and a two-predictor R^2 of .260. These are previously reported findings. Rewriting their presentation does not make the underlying survey a new empirical investigation. The present contribution is a critical secondary interpretation of the aggregate evidence, with an explicit check of its statistical coherence.

This distinction matters because the numerical presentation contains conflicting significance values, an incompatible model F statistic, and inconsistent outcome labels. These issues affect whether a positive estimate can be described as statistically supported and whether a governance recommendation is proportionate to the evidence. An interpretation that considers uncertainty can retain the educational value of the study without presenting transcription errors as strong empirical findings.

The article addresses three questions. What do the reported associations indicate about managerial competence and work motivation in the West Lombok kindergarten context? Which inferential claims can be checked from the aggregate statistics, and which remain unresolved without participant records? What implications for principal support are reasonable when measurement and design limitations are taken seriously? The aim is to connect a transparent reading of the evidence with an educationally humane account of institutional development.

2 Conceptual perspective

SBM can be understood as the organisation of responsibility within a school community. Planning and monitoring are important, but the quality of governance also depends on whether institutional routines allow staff to contribute knowledge and respond to emerging needs. In early childhood education, this perspective directs attention to the work that makes consistent provision possible: coordinating people, keeping useful records, resolving practical difficulties, and communicating decisions. These activities provide the conceptual basis for examining managerial competence without reducing leadership to paperwork.

Work motivation is interpreted here at the principal level, as specified in the survey constructs. It should not be treated as interchangeable with teacher motivation, staff morale, or a particular psychological theory of intrinsic motivation. The available questionnaire summaries do not establish these distinctions at item level. A higher motivation score may signal greater engagement, but the evidence does not identify whether that engagement reflects professional commitment, external incentives, institutional expectations, or other influences.

Research on knowledge sharing offers a possible organisational perspective for interpreting these constructs. Zeinabadi and Abbasian (2024) developed a school leadership scale encompassing role modelling, trust building, expectations, a supportive environment, and encouragement. Zhang et al. (2024) examined relationships among authentic leadership, teacher knowledge sharing, psychological empowerment, and interactional justice in Chinese primary schools. Their findings suggest that leadership practices may be understood through the conditions that enable people to exchange professional knowledge. These mechanisms were not measured in the West Lombok survey and are therefore used as interpretive possibilities rather than tested explanations.

Awan and Ather (2024) investigated knowledge management in relation to departmental leadership and teacher performance in higher education. That setting differs substantially from kindergarten provision. Its relevance here is conceptual: institutional coordination may depend on how expertise is created and shared, as well as on individual leadership attributes. Any extension of this proposition to early childhood governance must be tested directly. The current analysis does not estimate knowledge-sharing effects, mediation, or interactions between competence and motivation.

3 Methods

3.1 Design and provenance

We conducted a secondary examination of aggregate survey statistics and their interpretation. The materials comprised the supplied manuscript, its embedded tables and statistical images, and the public record of the earlier article by Habibi et al. (2026). No new survey was administered, and no individual participant dataset was available for this analysis. The statistical checks therefore concern relationships that can be reconstructed algebraically from the reported summaries; they do not reproduce the original data-processing workflow.

The underlying study was described as a quantitative survey of kindergarten principals in West Lombok, Indonesia. The supplied manuscript dates the primary data to September 2022 and reports analysis in SPSS version 22.0. The published article describes an ex post facto design involving 36 principals. The present article treats these as descriptions of the same survey evidence. The available materials do not provide sufficient detail to verify the eligible population, recruitment procedures, missing-data treatment, or whether responses were obtained independently across institutions.

3.2 Measures and respondent characteristics

Three questionnaire constructs were reported: managerial competence, work motivation, and SBM implementation quality. Each initial questionnaire contained 70 items and used five response alternatives. Item screening reportedly retained 68 managerial-competence items and 69 items in each of the other two scales. Pearson correlations were used for item assessment, and Cronbach’s alpha was used to assess internal consistency. The full item wording, response anchors, scoring rules, item-screening threshold, and instrument-testing sample were not available. Consequently, measurement validity cannot be independently established from the alpha coefficients.

The educational profile comprised 2 respondents with senior-secondary education (5.6%), 30 with bachelor’s degrees (83.3%), and 4 with master’s degrees (11.1%). Other characteristics, including leadership experience and school resources, were not available. Table 1 summarises the instrument information and descriptive statistics retained from the manuscript. Scores are reported in their original units. Because the scales contain different numbers of items and represent different constructs, comparisons of their raw means are not used to rank competence, motivation, or management quality.

Table 1
Reported measures and descriptive statistics

Construct	Items	Alpha	Mean	SD	Range
Managerial competence	68	.969	305.92	24.952	264–340
Work motivation	69	.964	310.50	25.584	274–345
SBM implementation quality	69	.982	302.56	26.463	267–340
Note. N = 36 for the reported descriptive statistics. Items refers to items retained after screening. Alpha values are the reported Cronbach coefficients; the instrument-testing sample is not independently documented. Range gives the observed minimum and maximum.					

3.3 Analytical procedures

The substantive analysis retained the reported Pearson correlations, R^2 values, and regression coefficients, while separating these estimates from conflicting claims about significance. Approximate two-sided correlation tests were calculated as $t = r\sqrt{[(n - 2)/(1 - r^2)]}$, with $n - 2$ degrees of freedom. Approximate 95% confidence intervals were calculated using Fisher’s transformation, $z = \text{atanh}(r)$, with standard error $1/\sqrt{(n - 3)}$, and transformed back to the correlation scale. These calculations use rounded correlations and assume the conventional conditions for Pearson inference; they cannot establish that those conditions were met.

For the reported model with two predictors, the coherence check used $F = (R^2/k)/[(1 - R^2)/(n - k - 1)]$, where $k = 2$ and $n = 36$. Adjusted R^2 was checked using $1 - (1 - R^2)(n - 1)/(n - k - 1)$. Coefficient significance was also checked from the reported t statistics using 33 residual degrees of freedom. Values reconstructed from rounded summaries are presented as approximate checks, not as verified replacements for the original SPSS output.

The embedded images were examined for their substantive content and correspondence with their captions. Marginal normality tests, the partial regression plot, and the linearity table were considered as evidence about reporting, rather than sufficient proof that regression assumptions held. Without participant records, residual distributions, influential observations, dependence between respondents, and robust alternatives could not be assessed. We did not conduct a systematic literature review; the cited studies provide a focused conceptual context.

4 Results

4.1 Measurement and descriptive evidence

The reported internal-consistency coefficients were high, ranging from .964 to .982. They indicate strong covariance among items under the reported scoring, but do not establish that the measures are unidimensional or distinct from one another. Given that each retained scale contains at least 68 items, the magnitude of alpha should also be interpreted in relation to scale length and possible item overlap. The aggregate evidence provides no basis for deciding whether highly similar items contributed to these estimates.

The source classified respondents into favourable performance categories, but the category thresholds were not supplied. It also paired the SBM frequencies of 17 and 19 with percentages of 43% and 57%, although the frequencies imply 47.2% and 52.8% when $N = 36$. We therefore do not use the categorical labels to claim that provision was good or very good. The continuous descriptive statistics in Table 1 provide a more transparent account of the reported score distributions.

4.2 Bivariate associations

Managerial competence was positively correlated with the reported SBM outcome ($r = .295$). The two-sided significance value in the correlation table was .081, consistent with the approximate test calculated from r and N . The approximate confidence interval ranged from $-.037$ to $.568$. Thus, the evidence is compatible with a positive association, but the interval includes zero and remains wide. The result does not support a claim of a statistically significant association at the conventional .05 threshold, nor does it demonstrate that managerial competence is irrelevant.

Work motivation showed a larger positive correlation ($r = .488$). Its approximate confidence interval ranged from .190 to .704, and the calculated two-sided p value was approximately .0025, which rounds to .003 as in the reported correlation table. Table 2 distinguishes reported and calculated values. The difference between the two observed correlations is descriptive: the correlation between the predictors was not supplied, so a direct statistical comparison of these dependent correlations was not performed.

Table 2
Associations with the reported management outcome

Predictor	Reported r	Reported p	Approximate 95% CI	Calculated p
Managerial competence	.295	.081	-.037 to .568	.0807
Work motivation	.488	.003	.190 to .704	.0025
Note. CI = confidence interval. Calculated values use the rounded correlations and N = 36. They are conventional Pearson summary checks and are not a reanalysis of individual responses.				

4.3 Joint model and regression coefficients

The reported model combining managerial competence and work motivation had $R = .510$ and $R^2 = .260$. These values are coherent after rounding and indicate that the fitted model accounted for 26.0% of the reported outcome variance within this sample. This is an in-sample association; predictive accuracy in another group was not evaluated. Relative to the motivation-only R^2 of .238, the joint R^2 is higher by .022, or 2.2 percentage points. This difference is compatible with a limited additional contribution from competence after motivation is considered, but does not establish the practical value of the model.

The supplied equation was $Y = 110.950 + 0.166X_1 + 0.453X_2$, where X_1 is managerial competence and X_2 is work motivation. The reported standardised coefficients were .157 and .438, respectively. These estimates are consistent with motivation having the larger coefficient in the fitted model. They do not establish a causal effect, and their ordering was not subjected to a formal comparison.

Table 3
Reported model summaries and algebraic checks

Model	R	R ²	Reported F	Calculated F	Calculated p
Competence only	.295	.087	3.237	3.240	.0807
Motivation only	.488	.238	10.614	10.619	.0025
Both predictors	.510	.260	51.797	5.797	.0070
Note. Calculations in this table use the reported rounded R^2 values. Degrees of freedom are (1, 34) for the single-predictor models and (2, 33) for the joint model. The reported model p values were .000 in all three rows; they are incompatible with the corresponding F statistics and degrees of freedom. Small differences between checks based on r and R^2 reflect rounding.					

For the joint model, the F statistic calculated from $N = 36$, $k = 2$, and $R^2 = .260$ is approximately 5.797, with p approximately .007. The reported value of 51.797 cannot be reconciled with those model summaries. The calculated adjusted R^2 is approximately .215, consistent with the value in the manuscript. These checks identify an internal reporting problem and support a qualified interpretation of the joint association; only the original analysis files can establish the correct underlying output.

Table 4
Reported joint model coefficients

Term	B	SE	Beta	Reported t	Reported p	Calculated p
Intercept	110.950	59.739	—	1.857	.072	.0723
Managerial competence	.166	.167	.157	.992	.328	.3284
Work motivation	.453	.163	.438	2.778	.000	.0090
Note. B = unstandardised coefficient; SE = standard error; Beta = standardised coefficient. Calculated p values are approximate two-sided tests based on the reported t values and 33 residual degrees of freedom. Small differences between B/SE and reported t are compatible with rounding.						

The competence coefficient had a reported p value of .328 and is not statistically supported at .05 in the joint model. For motivation, $t = 2.778$ implies p approximately .009, rather than the reported .000. This distinction preserves evidence of a positive conditional association for motivation while correcting the impression of substantially stronger significance. A software display of .000 should never be interpreted as an exact probability of zero; here, the additional problem is that it is inconsistent with the reported test statistic.

4.4 Diagnostic and construct reporting

The normality account reported p values of .016, .024, and .027 for competence, motivation, and the outcome, respectively. All are below .05, despite the accompanying claim that they exceed .05. If these are the correct test probabilities, they do not support accepting marginal normality. Moreover, regression inference requires consideration of the conditional error distribution, rather than proof that each measured variable is normally distributed. The available documentation does not establish residual normality.

The reported deviation-from-linearity p values were .123 for competence and .323 for motivation. These values do not provide evidence against linearity under the tests described, but failure to reject a deviation is not proof that the relationship is linear. One image captioned as a scatterplot instead contains a paragraph about normality, while the available partial regression image is not a residual-versus-fitted plot. These materials cannot independently establish homoscedasticity.

Several embedded outputs label the dependent variable “Mutu Pelayanan Pendidikan”, meaning educational service quality, whereas the narrative identifies it as SBM implementation quality. The difference may reflect a labelling error or a distinction in the underlying instrument. Without the item list and variable dictionary, the two constructs cannot be assumed to be interchangeable. We retain the narrative label when discussing the reported estimates and qualify the outcome accordingly; claims about educational service quality remain unresolved.

5 Discussion

5.1 What the associations support

The most defensible substantive finding is that work motivation is positively associated with the reported management outcome in this small West Lombok sample. Managerial competence has a positive estimate, but its uncertainty is greater and its coefficient is not statistically supported when both predictors are included. This pattern gives a reason to investigate motivational conditions alongside competence development. It does not justify replacing management training with motivational programmes or attributing school difficulties to principals' personal commitment.

A modest or uncertain competence estimate can arise for several reasons, including limited sample size, restricted score variation, overlapping measures, or incomplete assessment of the managerial practices that matter in a particular setting. The present summaries cannot distinguish these explanations. The finding should therefore be treated as a prompt for better measurement and contextual investigation. Competence remains conceptually relevant to school governance even when one survey provides an imprecise estimate of its association.

The joint R^2 of .260 also requires proportionate interpretation. Approximately three quarters of the observed outcome variance remained outside the fitted two-predictor model, but this does not mean that the remainder can be assigned to a definite list of unmeasured causes. Unexplained variance may include omitted institutional characteristics, measurement error, and sampling variation. School resources, stakeholder participation, staff continuity, and governance routines are reasonable candidates for further study, rather than established explanations of the current results.

5.2 Principal support as an institutional responsibility

A humane reading of the evidence starts with the working conditions of school leaders and the educational purpose of their responsibilities. Encouraging principals to remain committed is unlikely to be sufficient if they lack time, access to professional advice, or opportunities to work with colleagues. Although these conditions were not measured here, they should inform the design of future research and locally negotiated improvement activities. This avoids treating motivation as an obligation to maintain effort regardless of institutional circumstances.

Managerial development can be made concrete through mentoring on school planning, allocation of responsibilities, communication, and review of institutional activity. Such support should help leaders solve problems they encounter in practice. A principal network, for example, could discuss a recurring coordination difficulty, compare feasible responses, and review implementation at a later meeting. This is a proposed form of professional support, not an intervention whose effectiveness has been demonstrated by the survey.

Motivational support may include recognition of professional judgement, manageable administrative expectations, and opportunities to contribute to decisions. The educational aim is to enable sustained engagement with school responsibilities. Involving teachers and families in improvement discussions

can also help define whether governance changes are useful. Their perspectives were not represented in the available evidence, so the principal-level scores should not be treated as a complete account of how the institution is experienced.

5.3 Organisational learning and the early childhood context

The knowledge-sharing literature suggests ways to investigate how individual capacities become institutional practice. Zeinabadi and Abbasian (2024) identify leadership dimensions that can support professional exchange, while Zhang et al. (2024) emphasise empowerment and fair interaction in their model of teacher knowledge sharing. Applied cautiously, these perspectives suggest questions about whether kindergarten staff have protected time to discuss practice, can raise difficulties without blame, and can retain useful knowledge when responsibilities change. They do not establish that knowledge sharing mediates the reported competence or motivation associations.

Ulfatin et al. (2022) examined a broader configuration of leadership and school conditions, reinforcing the importance of studying relationships within an institutional context. For West Lombok kindergartens, future inquiry should ask how principals coordinate administrative work with pedagogical responsibilities and communication with families. This would provide a more grounded explanation of governance than an exclusive focus on total questionnaire scores. Observations and interviews could clarify these processes without substituting illustrative accounts for measured findings.

Children's experiences remain the purpose of early childhood provision, but they were not an outcome in this survey. A future programme of governance research could connect institutional routines with independently assessed continuity of teaching, participation, or other appropriate educational indicators. Such work should include the perspectives of staff and families and use measures suitable for early childhood settings. The current evidence supports that research agenda rather than a claim that higher principal motivation improves child development.

6 Limitations and research priorities

The analysis is limited by its reliance on aggregate summaries. No original response matrix, item-level data, syntax, or complete model output was available. The calculations presented here are reproducible checks of rounded numbers, but cannot verify data entry, handling of missing observations, instrument scoring, or the correctness of the original estimates. Approximate Pearson confidence intervals and test probabilities depend on assumptions that cannot be established from the supplied figures.

The underlying sample of 36 principals provides imprecise estimates and does not justify broad generalisation. The scope of the eligible population and the recruitment process remain insufficiently documented. The cross-sectional design also leaves temporal ordering unresolved: motivational engagement could accompany stronger management, stronger institutional functioning could support motivation, or both could be related to other conditions. The survey cannot distinguish these possibilities.

Measurement limitations are substantial. High alpha values do not resolve item redundancy, construct overlap, or the discrepancy between SBM implementation quality and educational service quality. The instruments require accessible item lists, scoring documentation, and evidence appropriate to the sample and intended use. Categories such as good and very good should be reported only with defensible thresholds. Independent school records, teacher perspectives, and family perspectives would strengthen future assessment of governance.

A useful next investigation would retain a clear definition of the governance outcome, obtain a larger and well-documented sample, and report effect estimates with uncertainty alongside complete model diagnostics. Repeated observations would help examine change over time. Evaluation of managerial mentoring or motivational support would require an explicit intervention design and suitable comparison conditions. These priorities follow from the limits of the evidence; they are not results of the present analysis.

7 Conclusion

The West Lombok survey provides qualified evidence of a positive association between principals' work motivation and the reported management outcome. The positive managerial-competence estimate is less precise and does not meet the conventional significance threshold in either the bivariate or joint interpretation presented here. The reported joint model accounts for 26.0% of outcome variance, but conflicting statistical entries and outcome labels restrict stronger conclusions. Transparent use of previously reported evidence allows these limitations to be acknowledged while preserving the study's local relevance.

For early childhood governance, the reasonable implication is to study and support professional competence together with the institutional conditions that sustain engagement. Mentoring, realistic responsibilities, and opportunities for collegial learning are plausible avenues for development, whose effects need to be evaluated. Leadership support should help principals organise dependable educational provision while recognising their professional circumstances and the voices of teachers and families.

Declarations

Data availability

This analysis used aggregate statistics reproduced in the article and information from the published study by Habibi et al. (2026). Individual participant records were not accessed and are not deposited with this manuscript. The equations and numerical inputs for the summary checks are provided in Section 3.3 and Tables 2–4. The availability of the original survey dataset is not established in the materials examined.

Ethics and consent

The present analysis involved no new recruitment, intervention, or access to identifiable participant information. The materials examined do not document the ethics-review and consent arrangements for the original survey. No retrospective approval or exemption is claimed for that survey.

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Relationship to the earlier publication

The underlying survey findings were previously reported by M.A. Muazar Habibi, Abdul Kadir Jaelani, and Aulia Dwi Amalia (2026) in the International Journal of Special Education. This article presents a critical interpretation and algebraic assessment of aggregate reporting. It does not claim a new participant sample or an independent primary study. The earlier publication is cited to make the relationship between the works explicit.

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