

# A Structural Model on School Management Effectiveness

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## ABSTRACT

School management effectiveness remains a critical challenge in education systems worldwide. This study aimed to determine a structural model of school management effectiveness by examining the school governance, school-based management practices, and organizational commitment of public school teachers in Region XI. It employed a predictive research design utilizing Structural Equation Modeling approach, using adapted questionnaires for endogenous and exogenous variables. Data analysis included mean computation, correlation, multiple regression, and SEM. Model 1 yielded the best-fit model after modifications based on model-fitting criteria. The indices for CMIN/DF (1.194), p-value (0.166), NFI (0.994), TLI (0.998), CFI (0.999), GFI (0.983), RMSEA (0.020), and p-close (0.999) were all within the standard criteria, confirming the model's validity. It was confirmed that the hypothesized model, rooted in Contingency Theory, successfully captures the direct influence of exogenous variables and endogenous variables. Policymakers and school leaders may enhance governance frameworks through capacity-building programs for administrators and teachers, focusing on decision-making, transparency, and stakeholder collaboration. Inclusive school-based management practices, such as community involvement in planning and professional development to boost educators' organizational commitment, are crucial for improving learning environments and educational quality.

**Keywords:** Educational management, school governance, school-based management practices, organizational commitment, school management effectiveness

## INTRODUCTION

School management effectiveness remains a critical challenge in education systems worldwide. Poor management continues to hinder the progress of many schools. Inefficiencies in management further complicate operations, as well as weak leadership (Ibrahim & Daniel 2019). Additionally, the lack of management strategies and effective practices in managing schools highlights the pressing need for reform and capacity-building measures in school leadership and administration (Day et al., 2016)

In Japan, the education system has encountered persistent challenges in maintaining effective school management. The worsened challenges of managing schools emphasized the urgent need for more resilient and adaptive management practices (Olatunji & Adedeji, 2020). In Spain, the global struggle to uphold consistent school management has also been a critical concern, with school managers often exhibiting poor effectiveness in managing schools. These issues highlight the broader difficulties educational institutions face worldwide (Amin et al., 2021). Similarly, in Kenya, ineffective school leadership, inadequate planning, and lack of accountability have posed significant challenges to school management (Wambua, 2022).

In the Philippines, school management faces significant challenges, including inconsistent management practices and poor effectiveness, as noted by Bernardo (2023). Joaquin et al. (2020) highlighted that chronic mismanagement and inefficiencies in school operations exacerbate these issues. Additionally, Magsambol (2022) emphasized the prevalence of poor leadership, particularly in rural areas. In the Davao Region, Arcilla (2021) identified conflicting roles between school administrators and local officials, while Pulido (2020) observed a lack of effective leaders to guide schools.

If the issues surrounding school management effectiveness are not addressed, the consequences could be far-reaching, including a decline in overall school performance, diminished student engagement, and reduced

teacher effectiveness (Bush & Glover, 2016). Without intervention, these challenges will perpetuate inequities in educational outcomes, particularly for disadvantaged schools and students, leading to knowledge and methodological gaps in educational quality. If these gaps continue to widen, they could jeopardize the long-term success of students and undermine the potential of the education system (Rosser & Fahmi, 2018). Therefore, it is crucial to conduct this study promptly to identify solutions that can mitigate these negative consequences and enhance school management practices for better educational outcomes.

The study is anchored on Contingency Theory, which posits that organizational effectiveness results from the alignment of organizational characteristics with contextual factors such as environment, size, and strategy. This theory highlights the importance of governance, management practices, and organizational commitment as critical variables that influence overall effectiveness. Within the educational context, Contingency Theory underscores the need for schools to adapt their governance structures, school-based management practices, and organizational commitment to their specific circumstances. By doing so, schools can enhance their management effectiveness, ensuring efficient operations and improved educational outcomes.

This study aims to develop a structural model based on school governance, school-based management practices, organizational commitment, and school management effectiveness in educational institutions. The research objectives include assessing teachers' perceptions of school governance in terms of transparency, accountability, responsibility, participation, autonomy, equality, predictability, and dynamism; school-based management practices in terms of leadership and governance, curriculum and planning, accountability and continuous improvement, and management of resources; organizational commitment in terms of affective commitment, normative commitment, and continuance commitment; and school management effectiveness in terms of strong leadership, emphasis on basic skills, secure environment, high expectations for achievement, continuous assessment, and financial management flexibility.

The study also seeks to determine the significance of the relationships and influence of these factors on school management effectiveness and to identify the best-fit model explaining variations in school management effectiveness. Additionally, its findings contribute to Sustainable Development Goal (SDG) 4 by promoting inclusive and equitable education through effective school management and SDG 16 by strengthening institutions and governance for sustainable improvements in educational leadership.

The study proposes five conceptual models to explain the relationships among School Governance, School-based Management Practices, Organizational Commitment, and School Management Effectiveness. Model 1 suggests that all three factors are interrelated and directly influence School Management Effectiveness. Model 2 highlights the links between School Governance, School-based Management Practices, and Organizational Commitment, all impacting effectiveness. Model 3 focuses on School-based Management Practices and Organizational Commitment as key influencers. Model 4 assumes no significant relationships among the three factors but recognizes their direct effects. Model 5 explores interrelationships while emphasizing their collective impact. These models offer a comprehensive framework for understanding school management dynamics.

## METHODOLOGY

This study employed a descriptive-correlational design with structural equation modeling (SEM) to examine the influence of school governance, school-based management practices, and organizational commitment on school management effectiveness. Using survey questionnaires, it assessed the levels of these exogenous variables and their relationships with the endogenous variable. SEM enabled the simultaneous analysis of direct and indirect effects, providing a comprehensive model to enhance school management strategies and decision-making.

The study was conducted among the public elementary schools in Region XI. The Department of Education duly supervises these schools committed to providing free, accessible, equitable, culture-based, and complete basic education. Further, these schools are randomly selected by the researcher to avoid bias.

Moreover, Region XI has five provinces and six cities. These provinces and cities have been the home of eleven (11) Schools Division Offices, namely: Davao de Oro Division, Davao del Norte Division, Davao Occidental Division, Davao Oriental Division, Davao del Sur Division, Davao City Division, Digos City Division, Island

Garden City of Samal (IGACOS) Division, Mati City Division, Panabo City Division, and Tagum City Division.

The study selected 500 elementary school teachers from public elementary schools in Region XI using cluster sampling to ensure representation from different division offices and simple random sampling to avoid bias in selecting respondents from each division. Cluster sampling involved dividing the population into existing groupings (clusters) and randomly selecting a sample from these clusters. These clusters represent naturally occurring but heterogeneous groupings within the population. Simple random sampling was then applied within the selected clusters, ensuring that each teacher had an equal probability of being chosen, thereby enhancing the study's objectivity and representation.

To address the research questions, survey questionnaires adapted from various authors were used to collect data. Four research instruments focused on School Governance, School-Based Management Practices, Organizational Commitment, and School Management Effectiveness. These instruments were modified to align with the study's objectives and validated by experts, resulting in an average score of 4.71, indicating excellence. The Cronbach Alpha coefficient was used to assess the reliability of these instruments, distributed to 30 public school teachers. Despite varying recommendations on the minimum threshold, this study opted for a conservative threshold of 0.70. The questionnaires demonstrated excellent reliability, with Cronbach's Alpha coefficients of 0.985 for School Governance, 0.984 for School-Based Management Practices, 0.937 for Organizational Commitment, and 0.980 for School Management Effectiveness.

The Likert scale was used to determine the range of means for the variables, with respondents rating items on a scale from 1 (strongly disagree) to 5 (strongly agree). The survey questionnaire on School Governance, adapted from OECD (2013), included 40 items with eight indicators: transparency, accountability, responsibility, participation, autonomy, equality, predictability, and dynamism. The School-Based Management Practices questionnaire, adapted from Bustamante (2022), had 20 items with four indicators: leadership and governance, curriculum and planning, accountability and continuous improvement, and management of resources. The Organizational Commitment questionnaire, adapted from Allen & Meyer (1990), included 18 items with three indicators: affective commitment, normative commitment, and continuance commitment. Finally, the School Management Effectiveness questionnaire, adapted from Verma and Chabra (1996), included 30 items with six indicators: strong leadership, emphasis on basic skills, secure environment, high expectation on achievement, continuous assessment, and finance management flexibility.

After validation and expert feedback, the final questionnaires were prepared for administration.

Data collection for the study was conducted in public schools in Region XI. Following approval from Research and Ethics Committee and the administration, permission was obtained from the Department of Education and school officials. The researcher provided an overview of the study and distributed informed consent forms through an online platform to ensure accessibility and convenience. Only respondents who consented to participate were given access to the survey questionnaire. Data collection was conducted through an online survey, with participants given ample time to complete the questionnaire. The collected responses were compiled, tabulated, and analyzed using statistical methods. Confidentiality and data security were maintained throughout the process.

The best-fit model is evaluated using several Goodness of Fit (GoF) indices. The CMIN/DF, or chi-square/degrees of freedom, should be less than 5.0, indicating an acceptable level of discrepancy between observed and expected data. A p-value greater than 0.05 suggests that the model's predictions are not significantly different from the actual observations. The Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and Goodness of Fit Index (GFI) should all be above 0.95, indicating that the model closely fits the data. The Root Mean Square Error of Approximation (RMSEA) should be below 0.05, reflecting a good fit with minimal error. Furthermore, a p-value greater than 0.05 further supports the model's adequacy. These indices, taken together, confirm that the model accurately represents the data and performs well in predicting outcomes.

This research obtained the approval of the ethics review board recognized by the institution. It was highlighted in the approval that this research thus not cause any potential harm to anyone involved in the study.

## RESULTS

### Descriptive Table

| Variables                                | Mean        | Description      |
|--|-------------|------------------|
| <b>School Governance</b>                 | <b>4.38</b> | <b>Very High</b> |
| Transparency                             | <b>4.39</b> | <b>Very High</b> |
| Accountability                           | <b>4.34</b> | <b>Very High</b> |
| Responsibility                           | <b>4.39</b> | <b>Very High</b> |
| Participation                            | 4.36        | <b>Very High</b> |
| Autonomy                                 | 4.36        | <b>Very High</b> |
| Equality                                 | 4.41        | <b>Very High</b> |
| Predictability                           | 4.40        | <b>Very High</b> |
| Dynamism                                 | 4.38        | <b>Very High</b> |
| <b>School-Based Management Practices</b> | 4.36        | <b>Very High</b> |
| Leadership and Governance                | 4.35        | <b>Very High</b> |
| Curriculum and Planning                  | 4.31        | <b>Very High</b> |
| Accountability/Continuous Improvement    | 4.40        | <b>Very High</b> |
| Management of Resources                  | 4.36        | <b>Very High</b> |
| <b>Organizational Commitment</b>         | 4.23        | <b>Very High</b> |
| Affective Commitment                     | 4.28        | <b>Very High</b> |
| Normative Commitment                     | 4.25        | <b>Very High</b> |
| Continuance Commitment                   | 4.18        | <b>High</b>      |
| <b>School Management Effectiveness</b>   | <b>4.36</b> | <b>Very High</b> |
| Strong Leadership                        | <b>4.32</b> | <b>Very High</b> |
| Emphasis on Basic Skills                 | <b>4.37</b> | <b>Very High</b> |
| Secure Environment                       | 4.35        | <b>Very High</b> |
| High Expectation on Achievement          | 4.35        | <b>Very High</b> |
| Continuous Assessment                    | 4.44        | <b>Very High</b> |
| Finance Management Flexibility           | 4.34        | <b>Very High</b> |

The findings in the table show that teachers in public elementary schools in Region XI have a very positive view of school governance, school-based management (SBM) practices, organizational commitment, and school management effectiveness. School governance is seen as consistently strong, with equality receiving the highest rating and accountability the lowest, though both are still rated very highly. Similarly, SBM practices are viewed

positively, especially in terms of accountability and continuous improvement, while curriculum and planning received the lowest rating, but remain very high.

Teachers also show strong organizational commitment, with the highest rating for affective commitment, indicating a deep emotional attachment to their schools. Continuance commitment ranked the lowest, meaning teachers stay in their roles out of both necessity and choice. Finally, school management effectiveness is highly regarded, with continuous assessment practices receiving the highest rating, while strong leadership ranked the lowest, but still within the very high perception range.

Overall, the results highlight a consistently positive perception of governance, management, and commitment, emphasizing the strong implementation of school policies and practices in Region XI.

### Table of Correlation

| School Management Effectiveness   |       |         |                |                |
|-----------------------------------|-------|---------|----------------|----------------|
|                                   | r     | p-value | Decision on H0 | Interpretation |
| School Governance                 | 0.886 | .000    | Reject         | Significant    |
| School-Based Management Practices | 0.861 | .000    | Reject         | Significant    |
| Organizational Commitment         | 0.792 | .000    | Reject         | Significant    |

The study's findings show a strong connection between school governance, school-based management practices, organizational commitment, and school management effectiveness. The p-value of 0.000 for each variable, which is below the 0.05 significance level, confirms that these factors have a meaningful impact. As a result, the null hypothesis is rejected in favor of the alternative hypothesis, meaning that effective governance, strong management practices, and high organizational commitment all contribute positively to school management effectiveness.

The correlation analysis also shows strong positive relationships, with school governance having the highest correlation ( $r = 0.886$ ), followed by school-based management practices ( $r = 0.861$ ) and organizational commitment ( $r = 0.792$ ). These findings highlight the crucial role of governance in improving school management effectiveness, with management practices and organizational commitment also playing important roles. Overall, the results suggest that promoting strong governance, inclusive management strategies, and organizational dedication is key to enhancing school management effectiveness.

### Table of Degree of Influence

| School Management Effectiveness   |      |                             |      |       |      |                           |                |
|-----------------------------------|------|-----------------------------|------|-------|------|---------------------------|----------------|
|                                   |      | Unstandardized Coefficients |      |       |      | Standardized Coefficients |                |
|                                   | B    | Std Error                   | B    | t     | Sig  | Decision on Ho            | Interpretation |
| Constant                          | 0.26 | 0.09                        |      | 3.02  | 0.03 |                           |                |
| School Governance                 | 0.49 | 0.04                        | 0.49 | 11.15 | 0.00 | Reject                    | Significant    |
| School-Based Management Practices | 0.27 | 0.04                        | 0.27 | 6.14  | 0.00 | Reject                    | Significant    |
| Organizational Commitment         | 0.19 | 0.03                        | 0.21 | 6.59  | 0.00 | Reject                    | Significant    |



**R= 0.91;      R<sup>2</sup> = 0.83;      F-value= 777.28;      p-value= 0.000**

The regression analysis shows that school governance, school-based management practices, and organizational commitment together explain a significant portion of the variation in school management effectiveness. The model's F-value of 777.28 and p-value of 0.000 indicate that these factors have a statistically significant impact on school management effectiveness. This supports the contingency theory, which suggests that an organization's structure and management strategies should align with its specific context to achieve the best outcomes.

The analysis also reveals strong relationships between school management effectiveness and the three key factors. School governance is particularly important ( $B = 0.49$ ,  $t = 11.15$ ,  $p = 0.00$ ), highlighting the role of effective leadership in schools. This supports the idea from contingency theory that governance frameworks should be adapted to meet the unique needs of each school. Similarly, school-based management practices ( $B = 0.27$ ,  $t = 6.14$ ,  $p = 0.00$ ) play a significant role in improving school effectiveness, emphasizing the value of decentralized decision-making. Organizational commitment ( $B = 0.21$ ,  $t = 6.59$ ,  $p = 0.00$ ) is also an important factor, showing that a dedicated and engaged workforce is crucial for enhancing school management.

These findings align with existing research supporting the use of contingency theory in education. Wu et al. (2022) note that flexible governance structures improve organizational efficiency, while Zhou et al. (2019) suggest that school-based management strategies enhance decision-making and resource allocation when tailored to the school's needs. Huang et al. (2023) argue that organizational commitment fosters a culture of accountability and performance, strengthening overall school effectiveness.

Overall, this study emphasizes the importance of adjusting school governance, management practices, and organizational commitment to fit the specific needs of the educational environment. Future research could explore other factors that impact school management effectiveness to further refine contingency-based strategies in education.

### Best Fit Model on School Management Effectiveness

|         |           |              | MODEL   |         |         |         |
|---------|-----------|--------------|---------|---------|---------|---------|
| INDEX   | CRITERION | Model 1      | Model 2 | Model 3 | Model 4 | Model 5 |
| CMIN/DF | <5        | <b>1.194</b> | 6.310   | 8.377   | 10.712  | 6.527   |
| P-VALUE | >0.05     | <b>0.166</b> | 0.000   | 0.000   | 0.000   | 0.000   |
| NFI     | >0.95     | <b>0.994</b> | 0.925   | 0.900   | 0.871   | 0.922   |
| TLI     | >0.95     | <b>0.998</b> | 0.927   | 0.899   | 0.867   | 0.924   |
| CFI     | >0.95     | <b>0.999</b> | 0.936   | 0.911   | 0.882   | 0.933   |
| GFI     | >0.95     | <b>0.983</b> | 0.838   | 0.824   | 0.759   | 0.835   |
| RMSEA   | <0.05     | <b>0.020</b> | 0.103   | 0.122   | 0.140   | 0.105   |
| P-CLOSE | >0.05     | <b>0.999</b> | 0.000   | 0.000   | 0.000   | 0.000   |

The table presents the goodness-of-fit model indices, including Chi-Square/Degrees of Freedom (CMIN-DF), Probability Value (P-VALUE), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), and Probability Close (P-CLOSE), which are evaluated based on standard criteria. Among the five models tested, Model 1 is identified as the best fit, with values meeting the required standards: CMIN/DF of 1.194, P-VALUE of 0.166,

NFI of 0.994, TLI of 0.998, CFI of 0.999, GFI of 0.983, RMSEA of 0.020, and P-CLOSE of 0.999.

In contrast, Models 2, 3, 4, and 5 do not meet the required standards. These models show higher CMIN/DF values (ranging from 6.310 to 10.712), lower NFI, TLI, CFI, and GFI values below 0.95, higher RMSEA values above 0.05, and P-CLOSE values of 0.000, indicating a poor fit. As a result, Model 1 is the best option for assessing school management effectiveness, as it meets all the necessary goodness-of-fit criteria.

The best-fit model for school management effectiveness in public schools in Region XI shows that school governance has the strongest impact on school management effectiveness, with a beta of 0.660 and an error of 0.12. School-based management practices contribute with a beta of 0.157 and an error of 0.09, while organizational commitment has a beta of 0.220 and an error of 0.11. The model also shows strong relationships between governance, management practices, and commitment, with covariance values indicating strong links between governance and management practices (0.28), management practices and organizational commitment (0.27), and governance and organizational commitment (0.25). These findings support contingency theory, which emphasizes that organizational effectiveness relies on how internal factors interact.

Overall, the model identifies key predictors of school management effectiveness and emphasizes the importance of leadership, structured management practices, and staff commitment in achieving the best educational outcomes.

The Best Fit Model results support Contingency Theory, which emphasizes the need for flexible governance, management practices, and organizational commitment to improve school management in Region XI's public schools. The findings highlight that school governance is crucial for setting direction and ensuring accountability, which directly impacts management success. The study also shows that school-based management practices and organizational commitment help improve school management, suggesting that involving teachers in decision-making and their dedication are important. The strong connections between these factors show how governance supports collaboration, leadership encourages teacher commitment, and teamwork strengthens alignment. These results are consistent with research by Garcia and Thornton (2019) and Harris and Jones (2020), which show that flexible governance, collaborative management, and strong commitment improve school management effectiveness.

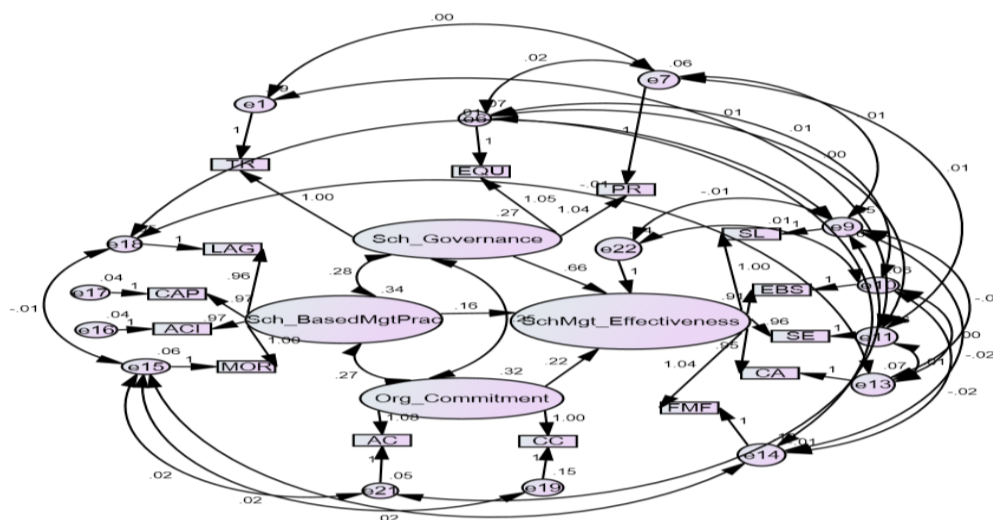


Figure 6. Best Fit Model. Model Showing the direct influence of school governance, school-based management practices, and organizational commitment to school management effectiveness and interrelationships among school governance, school-based management practices, and organizational commitment

### Legend:

Sch Governance = School Governance CC = Continuance Commitment

TR = Transparency Sch Mgt Effectiveness = School Management

Effectiveness

EQU = Equality SL = Strong Leadership

PR = Predictability EBS= Emphasis on basic Skills

Sch BasedMgtPrac = School-based SE = Secure Environment

Management Practices

LAG =leadership and Governance CA = Continuous Assessment

CAP = Curriculum and Planning FMF =Finance Management Flexibility

ACI = Accountability and Continuous Improvement

MOR= Management of Resources

Org Commitment = Organizational Commitment

AC = Affective Commitment

The study highlights the significance of continuous professional development for teachers and school administrators to enhance decision-making, transparency, and collaboration with parents and the community. By participating in training programs and professional development opportunities, educators can strengthen their commitment to improving the overall learning environment. Schools should also encourage active community involvement in planning activities to create a more inclusive and effective educational system.

Furthermore, the study emphasizes the importance of inclusive decision-making processes and fair resource distribution to promote peace, justice, and strong institutions. Strengthening accountability systems through progress tracking and evaluation ensures transparency and efficiency in school management. Partnering with local governments and private organizations can help address resource shortages, while future research may explore the role of technology in enhancing school governance. These efforts align with the Sustainable Development Goals, supporting sustainable progress in education and leadership.

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