



## Community Engagement and Institutional Collaboration as Predictors of School-Based Program Effectiveness: Evidence from Elementary Schools in Catanduanes, Philippines

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### Abstract

The effectiveness of school-based programs and projects in decentralized education systems increasingly hinges on schools' capacity to mobilize community stakeholders and sustain collaboration with external institutions, yet empirical evidence at the elementary level remains limited, particularly in geographically isolated contexts such as Catanduanes, Philippines. Anchored in the School-Based Management (SBM) framework, this study examined the levels of community engagement and institutional collaboration and analyzed their individual and combined influence on the effectiveness of school-based program implementation in public elementary schools in Zone 2 of the Division of Catanduanes using a quantitative descriptive–correlational design with a predictive component. Data were gathered from 215 randomly selected elementary school teachers through a validated researcher-developed questionnaire, with weighted means to determine variable levels and Pearson's correlation and multiple regression analyses to test relationships and predictive effects. Results showed that both community engagement and institutional collaboration were rated at high levels, with participation in decision-making and joint planning emerging as the strongest dimensions, while program implementation was likewise perceived as highly effective, particularly in planning and monitoring processes. Statistical analyses revealed strong and significant associations between community engagement and program effectiveness ( $r = 0.724$ ) and between institutional collaboration and effectiveness ( $r = 0.704$ ), while regression findings confirmed that both variables significantly predict program effectiveness, with community engagement emerging as the stronger predictor. Overall, the findings highlight the critical role of participatory governance and coordinated institutional support in strengthening school-based programs and provide empirical grounding for a targeted action plan to enhance stakeholder participation, cross-agency collaboration, and governance practices, thereby contributing to the advancement of Sustainable Development Goal 4 on inclusive and quality education.

**Keywords:** participatory governance; stakeholder partnerships; decentralized education; program implementation effectiveness; basic education management; school leadership support; SDG-4



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## INTRODUCTION

Educational effectiveness within decentralized governance increasingly depends on active and coordinated stakeholder mechanisms, as decision-making authority, resource allocation, and accountability responsibilities are transferred from central education authorities to local schools and communities. In such governance arrangements, schools are

expected to exercise greater autonomy while simultaneously engaging parents, community members, and partner institutions in planning, implementation, and evaluation processes. Existing research emphasizes that participatory governance structures and sustained institutional support critically shape school outcomes by aligning local needs with system-level resources and policies (Sompron, 2024; Donatille et al., 2025). Within this

framework, community engagement defined as parental involvement in school activities, consultative participation in decision making, and contributions to school resources has been consistently associated with improved accountability, contextual relevance, and localized problem solving in educational programs (Sompron, 2024; Tejada, 2023). Complementing this, institutional collaboration, which involves structured partnerships with government agencies, non-governmental organizations, and supplementary institutions, strengthens strategic planning, optimizes resource utilization, and supports coordinated program implementation, thereby enhancing institutional capacity to deliver school-based initiatives effectively (Donatille et al., 2025; Worapongpat, 2025). Together, community engagement and institutional collaboration form an integrated governance ecosystem that enables schools to combine local knowledge with external expertise and institutional support, fostering more resilient and responsive implementation of school-based programs (Donatille et al., 2025; Sompron, 2024).

Despite broad theoretical agreement on the importance of these governance mechanisms, empirical evidence remains fragmented, particularly at the elementary school level within decentralized education systems where program effectiveness is most critical to foundational learning outcomes (Donatille et al., 2025; Cañeda Dumlaog, 2025). Much of the existing literature on community engagement has concentrated on sectors such as school health initiatives or higher education contexts, documenting general benefits of partnerships but providing limited quantitative evidence on how engagement predicts the effectiveness of school-based programs in basic education settings (Sompron, 2024; Tejada, 2023). Similarly, studies examining institutional collaboration have largely relied on qualitative case-based approaches, offering rich contextual insights yet lacking robust statistical models that capture the joint and predictive influence of community engagement and institutional collaboration on program

outcomes (Worapongpat, 2025; Cañeda Dumlaog, 2025). Moreover, research conducted in geographically isolated and resource-constrained contexts—such as island provinces in the Philippines—remains scarce, thereby limiting the global applicability and contextual sensitivity of existing findings (Tejada, 2023; Sompron, 2024).

Against this backdrop, the present study situates community engagement and institutional collaboration as central explanatory mechanisms through which decentralized governance influences the effectiveness of school-based programs in elementary schools in Catanduanes, Philippines. Rather than treating these constructs as abstract governance ideals, the study operationalizes them into measurable dimensions and examines how their individual and combined effects shape program implementation outcomes at the school level. By employing a quantitative modeling approach, the research generates empirical evidence to inform a targeted action plan aimed at strengthening participatory governance, multi-agency coordination, and resource optimization within decentralized education systems. Furthermore, the findings contribute to the international education agenda, particularly Sustainable Development Goal 4 (SDG 4) on inclusive, equitable, and quality education, by identifying practical, evidence-based pathways through which stakeholder participation and cross-institutional coordination can enhance the effectiveness of school-based programs across diverse educational contexts (Tripon, 2025; Mahinay et al., 2025).

**Statement of the Problem.** The effectiveness of school-based programs and projects is increasingly influenced by community engagement and institutional collaboration within decentralized governance frameworks such as School-Based Management, yet empirical evidence at the elementary level remains limited. To address this gap, the study examined the levels of community engagement and institutional collaboration and their influence on the effectiveness of school-based

programs and projects in elementary schools in Zone 2 of the Division of Catanduanes, Philippines generating evidence-based inputs to strengthen stakeholder participation and collaborative governance in basic education. Specifically, the study sought to answer the following research questions:

1. What is the level of community engagement in the implementation of school-based programs and projects in elementary schools in Zone 2 in terms of:
  - 1.1 participation in school activities;
  - 1.2 decision-making and consultation; and
  - 1.3 resource support and contribution?
2. What is the level of institutional collaboration among stakeholders in supporting the implementation of school-based programs and projects in terms of:
  - 2.1 inter-agency partnerships and linkages;
  - 2.2 joint planning and program development; and
  - 2.3 sharing of resources and technical assistance?
3. What is the level of effectiveness of the implementation of school-based programs and projects in elementary schools in Zone 2 in terms of:
  - 3.1 planning;
  - 3.2 resource allocation; and
  - 3.3 monitoring and evaluation?
4. Is there a significant relationship between the level of community engagement and the level of effectiveness of school-based program and project implementation in elementary schools in Zone 2?
5. Is there a significant relationship between the level of institutional collaboration and the level of effectiveness of school-based program and project implementation in elementary schools in Zone 2?
6. To what extent do community engagement and institutional collaboration, individually and collectively, significantly predict the

overall effectiveness of school-based program and project implementation in elementary schools in Zone 2?

**Null Hypotheses.** At 0.05 significance level, the following hypotheses were tested:

$H_{01}$ : There is no significant relationship between the level of community engagement and the level of effectiveness of school-based program and project implementation in elementary schools in Zone 2.

$H_{02}$ : There is no significant relationship between the level of institutional collaboration and the level of effectiveness of school-based program and project implementation in elementary schools in Zone 2.

$H_{03}$ : Community engagement and institutional collaboration, individually and collectively, do not significantly predict the overall effectiveness of school-based program and project implementation in elementary schools in Zone 2.

**Scope of the Study.** This study was conducted in selected public elementary schools in Zone 2 of the Division of Catanduanes during School Year 2025–2026, focusing on community engagement, institutional collaboration, and the effectiveness of school-based programs and projects. Using randomly selected elementary school teachers as respondents, it examined levels of community engagement in participation, decision-making, and resource support; institutional collaboration in partnerships, joint planning, and resource sharing; and program effectiveness in planning, resource allocation, and monitoring and evaluation. It further analyzed the relationships between these variables and determined the predictive influence of community engagement and institutional collaboration on program effectiveness within a School-Based Management (SBM) framework.

**Theoretical and Conceptual Framework.** Grounded in Stakeholder Theory, this study conceptualizes schools as open systems whose effectiveness depends on the meaningful

participation and collaboration of key stakeholders, including parents, community members, local government units, and partner institutions.

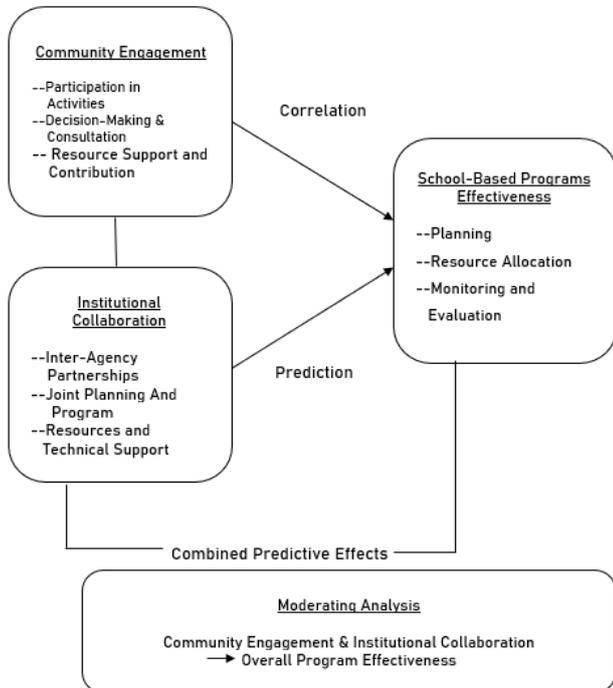


Figure 1.  
*Conceptual Paradigm of the Study*

Stakeholder Theory posits that organizations achieve superior outcomes when stakeholders are actively engaged in decision-making, held accountable for contributions, and mobilized strategically to provide resources. In educational contexts, recent scholarship affirms that active stakeholder involvement enhances program quality, promotes transparency, and strengthens institutional support, thereby improving overall organizational performance (Harrison et al., 2016; Laplume et al., 2020). Complementing this perspective, School-Based Management (SBM) Theory emphasizes decentralized governance, arguing that school effectiveness improves when authority and responsibility for decision-making are devolved to the school level and supported by robust community and institutional partnerships. Empirical studies demonstrate that SBM positively influences planning quality, resource utilization, and monitoring mechanisms, particularly when stakeholder engagement is strong (Gertler et

al., 2017; Caldwell, 2016). Together, these theories provide a coherent lens for understanding how participatory governance and collaborative engagement serve as critical drivers of school-based program effectiveness. The conceptual paradigm is grounded in the theoretical propositions that active community engagement and sustained institutional collaboration are key determinants of school-based program effectiveness within decentralized education systems. It posits that meaningful stakeholder participation and coordinated partnerships with external institutions strengthen program planning, implementation, accountability, and sustainability. Operationally, the paradigm presents a predictive and correlational framework in which community engagement reflected in participation, decision-making and consultation, and resource support and institutional collaboration manifested through inter-agency partnerships, joint planning, and shared resources and technical assistance serve as independent variables influencing school-based program effectiveness in elementary schools in Zone 2, Catanduanes. Program effectiveness, as the dependent variable, is represented by planning efficiency, resource allocation, and monitoring and evaluation processes, underscoring the role of engagement and collaboration in enhancing program execution and evidence-based governance in decentralized educational contexts.

## LITERATURE REVIEW

The effectiveness of school-based programs and projects has emerged as a critical concern within decentralized education systems, particularly under School-Based Management (SBM) frameworks that foreground stakeholder participation, shared accountability, and localized decision-making (Caldwell, 2016; Gertler et al., 2017). As schools increasingly operate as open and community-centered systems, the roles of community engagement and institutional collaboration have been widely acknowledged as central mechanisms for strengthening program planning,

implementation fidelity, and sustainability (Bryson et al., 2016; Fullan, 2016). Contemporary scholarship underscores that meaningful stakeholder involvement enhances institutional responsiveness and aligns educational initiatives with contextual needs, especially in resource-constrained settings (Epstein & Sheldon, 2016; Khalifa et al., 2019). This literature review synthesizes recent empirical and theoretical studies to examine how community engagement and institutional collaboration influence school-based program effectiveness, while explicitly identifying gaps that the present study addresses within the elementary school context of Catanduanes, Philippines.

**Community Engagement as a Driver of School-Based Program Effectiveness.** Community engagement is consistently identified as a foundational pillar of effective school governance in decentralized education systems, where stakeholder participation directly influences decision-making quality and program outcomes (Epstein & Sheldon, 2016; Jeynes, 2018). Scholars conceptualize community engagement as multidimensional, encompassing participation in school activities, involvement in decision-making and consultation processes, and the provision of financial, material, or human resources that support educational initiatives (Khalifa et al., 2019). These dimensions collectively contribute to program legitimacy and local ownership, which are essential for sustaining school-based interventions beyond initial implementation phases (Fullan, 2016).

Empirical evidence demonstrates that schools with high levels of parental and community participation exhibit stronger accountability mechanisms, improved transparency, and enhanced alignment between school programs and community priorities (Jeynes, 2018; Epstein & Sheldon, 2016). Active stakeholder involvement has also been shown to strengthen planning processes by incorporating local knowledge and contextual realities, thereby increasing the relevance and feasibility of school-based projects (Khalifa et al., 2019). In

the Philippine context, Cordial (2025) provides localized evidence that sustained stakeholder engagement fosters collective responsibility and institutional resilience, reinforcing the importance of community participation in achieving program outcomes in geographically isolated and resource-limited areas.

Despite robust theoretical support, much of the existing literature concentrates on general school performance indicators such as learner achievement, attendance, or school climate, often at the secondary or system-wide level (Jeynes, 2016; Khalifa et al., 2019). There remains limited empirical research that disaggregates community engagement into specific dimensions and examines their direct predictive relationship with school-based program effectiveness at the elementary level. The present study addresses this gap by operationalizing community engagement into measurable components and empirically linking them to planning, resource allocation, and monitoring outcomes.

**Institutional Collaboration and Inter-Agency Partnerships in Education.** Institutional collaboration has gained increasing attention as a strategic mechanism for enhancing school capacity, particularly in decentralized systems where schools rely on external support to address resource and expertise constraints (Datnow & Park, 2018; Leithwood et al., 2020). Defined as structured partnerships between schools and government agencies, non-government organizations, and private institutions, collaboration enables access to technical assistance, financial resources, and professional development opportunities that strengthen program implementation and sustainability (Bryson et al., 2016).

Research emphasizes that joint planning and shared program development enhance coherence between school initiatives and broader policy or development agendas, thereby reducing fragmentation and duplication of efforts (Bryson et al., 2016). In elementary schools, where administrative and financial capacities are often limited, inter-agency collaboration plays a crucial role in supporting

systematic planning, monitoring, and evaluation processes (Leithwood et al., 2020). Cordial et al. (2025) further demonstrate that institutional support significantly enhances instructional leadership competence and financial management proficiency among elementary school heads, contributing to improved administrative and programmatic performance. However, existing studies frequently treat institutional collaboration as a contextual or enabling factor rather than a core predictor of program effectiveness (Datnow & Park, 2018). Moreover, few empirical investigations examine how institutional collaboration interacts with community engagement to influence program outcomes. The present study responds to this gap by modeling institutional collaboration as both an independent predictor and a complementary mechanism that may strengthen the effects of community engagement on school-based program effectiveness.

**School-Based Management and Program Effectiveness.** School-Based Management theory posits that devolving authority to the school level enhances planning quality, optimizes resource utilization, and strengthens accountability through participatory governance structures (Caldwell, 2016; Gertler et al., 2017). Empirical studies indicate that SBM is most effective when decision-making autonomy is supported by active stakeholder participation and strong institutional partnerships (Fullan, 2016). Schools operating under effective SBM frameworks demonstrate improved transparency, responsiveness, and monitoring systems, which are essential for successful program implementation.

Program effectiveness within SBM contexts is commonly assessed through indicators such as strategic planning, equitable resource allocation, and systematic monitoring and evaluation (Gertler et al., 2017). While prior studies confirm the positive influence of SBM on overall school performance, many focus on policy-level outcomes or aggregate performance measures rather than specific school-based programs and projects (Caldwell,

2016). This limitation restricts understanding of how stakeholder-driven mechanisms directly shape program-level effectiveness.

**Methodological Trends and Identified Research Gaps.** Recent educational research increasingly employs quantitative, descriptive–correlational designs to examine relationships among governance variables and school outcomes, enabling objective measurement and predictive analysis (Bhandari, 2021; Karafil & Uyar, 2023). Regression-based approaches, in particular, allow researchers to determine the relative and combined influence of multiple predictors on program effectiveness. However, much of the existing literature remains fragmented, examining community engagement and institutional collaboration in isolation.

Notably, there is a scarcity of localized, elementary-level studies conducted in rural or island provinces such as Catanduanes. The combined and interactive predictive effects of community engagement and institutional collaboration on school-based program effectiveness remain underexplored. Addressing this gap is essential for generating context-sensitive evidence that can inform decentralized governance strategies in basic education.

**Synthesis and Contribution of the Present Study.** Synthesizing the reviewed literature reveals strong theoretical support for stakeholder-driven governance in education yet limited empirical integration of community engagement and institutional collaboration as joint predictors of school-based program effectiveness. The present study advances the literature by operationalizing both constructs into specific, measurable dimensions, examining their individual and collective predictive effects using regression analysis, and providing localized evidence from elementary schools in Catanduanes. In doing so, the study contributes robust empirical insights that inform policy, strengthen School-Based Management practices, and guide future research in decentralized educational systems.

## METHODS

**Research Design.** This study employed a quantitative, descriptive–correlational research design with a predictive component to examine community engagement, institutional collaboration, and their influence on the effectiveness of school-based programs and projects. A descriptive–correlational design systematically quantifies variables to describe conditions and assess relationships without manipulating them (Bhandari, 2021; Oberiri Apuke, 2017) while also enabling prediction of outcomes through regression analysis (Karafil & Uyar, 2023). Quantitative designs like this are widely used in educational research to objectively measure associations and determine how predictor variables explain variations in dependent measures of effectiveness (GCU, 2023). Data were gathered via structured surveys and analyzed using Pearson’s correlation and multiple regression.

**Population, Samples and Sampling Technique.** The study population comprised all 467 public elementary school teachers from selected schools across eight districts of Zone 2 in the Division of Catanduanes. Given the heterogeneous distribution of teachers across districts and schools, an appropriate sample size was determined using Slovin’s formula, yielding 215 teacher–respondents. The use of this formula is widely accepted in educational and social science research when the population size is known and a manageable, yet statistically reliable sample is required, particularly in descriptive and correlational designs (Israel, 2016). The resulting sample size aligns with established methodological standards that underscore the importance of statistical power, precision, and representativeness in quantitative educational research (Creswell & Creswell, 2018).

To further enhance representativeness, the study employed proportionate stratified random sampling, with each district treated as a distinct stratum. Respondents from each school were selected proportionally based on their respective teacher populations, ensuring

that variations in school size did not skew the results. This sampling technique is recommended for studies involving naturally occurring subgroups, as it reduces sampling bias and improves the external validity of findings (Taherdoost, 2016). Moreover, random selection within each stratum ensured that every teacher had an equal probability of inclusion, thereby strengthening the credibility and generalizability of inferences drawn from the sample to the broader population.

**Instrumentation.** Data were collected using a researcher-developed questionnaire designed to capture the multidimensional nature of school-based program and project implementation. The instrument has three parts. Part I measured the level of community engagement in terms of participation in school activities, decision-making and consultation, and resource support and contribution. Part II assessed the extent of institutional collaboration among stakeholders, focusing on inter-agency partnerships and linkages, joint planning and program development, and the sharing of resources and technical assistance. Part III evaluated the level of effectiveness of program implementation with respect to planning, resource allocation, and monitoring and evaluation. The use of a structured, multidimensional Likert-scale instrument is consistent with established practices in educational and organizational research, as it enables systematic and reliable measurement of complex social constructs (Creswell & Creswell, 2018). Content validity was ensured through expert review by educators and research specialists, who evaluated the clarity, relevance, and alignment of the items with the study variables. Reliability was established through pilot testing involving respondents not included in the main sample, and internal consistency was analyzed using the split-half method, yielding a coefficient of 0.715, which is considered acceptable for descriptive and exploratory studies (Taber, 2018).

Evaluation and scoring were based on a four-point Likert scale to encourage discriminative responses and minimize central tendency bias. For community engagement, weighted mean

scores ranging from 3.25–4.00 were interpreted as strongly engaged, 2.50–3.24 as engaged, 1.75–2.49 as slightly engaged, and 1.00–1.74 as not engaged. Similarly, institutional collaboration was interpreted from very great extent to very small extent using the same numerical ranges, while effectiveness of implementation was categorized from very highly effective to not effective. These standardized scoring schemes facilitated consistent interpretation and meaningful comparison across variables.

**Data Analysis.** Data were analyzed using descriptive and inferential statistical techniques appropriate for a descriptive–correlational study with a predictive component. Descriptive statistics, specifically weighted mean and rank, were employed to determine the levels of community engagement, the extent of institutional collaboration, and the effectiveness of school-based program implementation. Inferential analyses included the Pearson product–moment correlation coefficient to examine the strength and direction of relationships among variables, and stepwise multiple regression analysis to identify significant predictors of implementation effectiveness. All analyses were conducted using IBM SPSS Statistics at a 0.05 level of significance, consistent with practices in educational research (Creswell & Creswell, 2018; Karafil & Uyar, 2023).

**Ethical Considerations.** Ethical clearance and permission from school authorities were secured prior to data collection from the selected schools across eight districts of Zone 2 in the Division of Catanduanes, Philippines. Informed consent was obtained from all participants, participation was voluntary, and anonymity and confidentiality were strictly observed throughout the research process. Collected data were stored in password-protected digital files accessible only to the researchers and will be securely deleted after five years through permanent digital erasure. All ethical procedures were aligned with established research standards (Resnik, 2018). The study acknowledges limitations, including self-report bias, cross-sectional design, and

contextual specificity, which may affect generalizability but nonetheless provide policy-relevant insights for strengthening school-based program governance (Creswell & Creswell, 2018).

## RESULTS

This section presents and discusses the study's findings on the levels of community engagement, institutional collaboration, and program implementation effectiveness in elementary schools in Zone 2, as well as the relationships and predictive influences among these variables, as informed by the descriptive, correlational, and regression analyses.

**Level of Community Engagement in the Implementation of School-Based Programs and Project.** As shown in Table 1, the results indicate a high level of community engagement in the implementation of school-based programs and projects, as reflected by an overall weighted mean of 3.71, interpreted as *strongly engaged*. This suggests that stakeholders in elementary schools actively participate in school initiatives and view themselves as integral partners in program implementation. Decision-making and consultation, which ranked highest (WM = 3.75), highlight that community members are not merely involved in activities but are meaningfully engaged in consultative processes that influence school plans and priorities.

Table 1  
*Composite Weighted Mean and Ranking of the Level of Community Engagement in the Implementation of School-Based Programs and Projects in Elementary Schools*

Variable	Weighted Mean	Verbal Interpretation	Rank
Participation in School Activities	3.70	Strongly Engaged	2
Decision-Making and Consultation	3.75	Strongly Engaged	1
Resource Support and Contribution	3.67	Strongly Engaged	3
Overall weighted mean	3.71	Strongly Engaged	

This finding implies a participatory governance environment consistent with school-based management principles. Participation in school activities also received a strong rating (WM =

3.70; Rank 2), indicating visible and consistent community presence in school events and programs. In contrast, resource support and contribution, which ranked lowest (WM = 3.67; Rank 3), suggest that while engagement remains strong, material or financial contributions may be constrained by contextual factors such as economic capacity. Overall, the pattern of results in Table 1 underscores that community engagement in these schools is strongest in participatory and decision-oriented roles rather than resource-driven involvement, reinforcing the value of inclusive governance over purely material support.

**Extent of Institutional Collaboration Supporting School-Based Program Implementation.** Similarly, as presented in Table 2, the findings indicate that institutional collaboration in supporting the implementation of school-based programs and projects is practiced to a very great extent, as evidenced by an overall weighted mean of 3.72. This suggests that schools benefit from well-established collaborative structures that facilitate coordinated action among partner institutions. Joint planning and program development emerged as the highest-ranked indicator (WM = 3.77), underscoring the emphasis placed on shared goal setting, collective decision-making, and synchronized program design among stakeholders. Such collaborative planning mechanisms enhance coherence and alignment in program implementation. Inter-agency partnerships and linkages, while still rated to a very great extent (WM = 3.71), ranked lowest, implying that formalized partnerships may be less consistently developed or sustained across all institutions. Meanwhile, resource and technical assistance sharing (WM = 3.67; Rank 2) reflects strong but slightly constrained collaborative support, potentially influenced by institutional capacity and resource availability. Overall, the pattern of results in Table 2 highlights that institutional collaboration is strongest in strategic and planning-oriented activities rather than in resource-intensive partnerships, emphasizing the centrality of coordinated planning in effective school-based program implementation.

Table 2  
*Composite Analysis of the Extent of Institutional Collaboration among Stakeholders in Supporting the Implementation of School-Based Programs and Projects*

Variable	Weighted Mean	Verbal Interpretation	Rank
Inter-agency Partnership and Linkages	3.71	Very Great Extent	3
Joint Planning and Program Development	3.77	Very Great Extent	1
Resource and Technical Assistance Sharing	3.67	Very Great Extent	2
Overall weighted mean	3.72	Very Great Extent	

**Effectiveness of School-Based Program and Project Implementation.** As shown in Table 3, the overall level of effectiveness in the implementation of school-based programs and projects in elementary schools is highly effective, with an overall weighted mean of 3.76. This indicates that schools are generally successful in executing planned programs, allocating resources, and conducting monitoring and evaluation activities. Among the indicators, planning ranked highest (WM = 3.83), highlighting that schools prioritize systematic program design, goal setting, and scheduling, which likely serves as a foundation for the effective implementation of initiatives. Monitoring and evaluation (WM = 3.77; Rank 2) also scored highly, suggesting that schools consistently track program progress and outcomes, enabling timely adjustments to enhance results. Resource allocation, while still highly effective, ranked lowest (WM = 3.67; Rank 3), implying that constraints in financial, material, or human resources may limit optimal deployment. Overall, the findings in Table 3 indicate that strategic planning and evaluative practices are the primary drivers of program effectiveness, while resource management remains a critical area for potential improvement.

Table 3  
*Composite Analysis of the Level of Effectiveness of the Implementation of School-Based Programs and Projects*

Variable	Weighted Mean	Verbal Interpretation	Rank
Planning	3.83	Highly Effective	1
Resource Allocation	3.67	Highly Effective	3
Monitoring and Evaluation	3.77	Highly Effective	2
Overall weighted mean	3.76	Highly Effective	

**Relationship Between Community Engagement and Program Implementation Effectiveness.**

Furthermore, as presented in Table 4, the analysis revealed a strong, positive, and statistically significant relationship between community engagement and the effectiveness of school-based program implementation, with a Pearson correlation coefficient of  $r = 0.724$  ( $p < 0.001$ ). This indicates that higher levels of community involvement are closely associated with greater program effectiveness in elementary schools. The strength of this relationship suggests that participatory practices—such as decision-making, consultation, and active participation in school activities—are not merely symbolic but substantially influence how well programs are implemented. The high correlation also implies that schools where stakeholders are more engaged tend to experience better coordination, responsiveness, and overall program outcomes. By rejecting the null hypothesis, the findings underscore that community engagement is a critical enabler of effective program execution, highlighting its role as a key driver in school-based management frameworks. In practical terms, fostering meaningful community participation can significantly enhance the success and sustainability of school initiatives.

Table 4  
*Pearson r Test between Community Engagement and Effectiveness of School-Based Program Implementation*

Variables	Statistical Test	Computed Value (r)	df	p-value	Decision	Interpretation
Community Engagement vs. Effectiveness	Pearson r	0.724	213	<0.001	Reject $H_0$	Significant, strong positive relationship

**Relationship Between Institutional Collaboration and Program Implementation Effectiveness.**

Similarly, as shown in Table 5, the Pearson correlation analysis indicates a strong, positive, and statistically significant relationship between the extent of institutional collaboration and the effectiveness of school-based program implementation, with  $r = 0.704$  ( $p < 0.001$ ). This finding suggests that schools that actively engage in collaborative mechanisms with partner institutions tend to implement programs more effectively. The strength of the

correlation highlights that inter-agency partnerships, joint planning, and sharing of resources and technical assistance are not peripheral activities but central drivers that enhance program coordination, coherence, and quality. By rejecting the null hypothesis, the results confirm that institutional collaboration plays a crucial role in ensuring program outcomes align with intended goals and standards. Practically, this implies that fostering sustained and meaningful collaboration among stakeholders can significantly strengthen program delivery, promote resource optimization, and enhance overall school-based management effectiveness, demonstrating that collaboration is a key enabler of successful school initiatives.

Table 5  
*Pearson r Test between Institutional Collaboration and Effectiveness of School-Based Program Implementation*

Variables	Statistical Test	Computed Value (r)	df	p-value	Decision	Interpretation
Extent of Institutional Collaboration vs. Level of Effectiveness of Implementation	Pearson r	0.704	213	<0.001	Reject $H_0$	Significant, strong positive relationship

**Predictive Influence of Community Engagement and Institutional Collaboration on Program Effectiveness.**

Finally, as presented in Table 6, the multiple regression analysis demonstrates that both community engagement and institutional collaboration significantly and positively predict the effectiveness of school-based program implementation in elementary schools. Community engagement ( $B = 0.412$ ,  $p < 0.001$ ) emerged as the strongest predictor, indicating that schools with higher levels of stakeholder participation, decision-making involvement, and consultative engagement tend to achieve greater program effectiveness. Institutional collaboration ( $B = 0.368$ ,  $p = 0.001$ ) also contributed significantly, suggesting that coordinated efforts among partner institutions, joint planning, and resource sharing enhance the quality and sustainability of program outcomes.

Table 6  
*Multiple Regression Analysis of Community Engagement and Institutional Collaboration on Program Implementation Effectiveness*

Predictor Variable	B (Coefficient)	Std. Error	t (df = 212)	p-value	95% CI	Interpretation
Intercept	5.356	1.420	3.772	0.002	2.330 to 8.383	Significant baseline effectiveness when predictors = 0
Community Engagement (X1)	0.412	0.110	3.745	<0.001	0.195 to 0.629	Significant positive predictor
Institutional Collaboration (X2)	0.368	0.112	3.286	0.001	0.146 to 0.590	Significant positive predictor

The significant intercept (B = 5.356, p = 0.002) reflects a substantial baseline level of program effectiveness even in the absence of these predictors, highlighting the inherent capacity of schools to implement initiatives.

Overall, the model confirms that both participatory engagement and collaborative institutional support are critical, complementary drivers of program success, emphasizing the importance of integrating stakeholder involvement and cross-institutional coordination in school-based management frameworks.

**Synthesis of Findings and Implications for School-Based Governance.** Taken together, the results reveal a consistent pattern in which participatory community engagement and structured institutional collaboration jointly reinforce the effectiveness of school-based programs and projects. While community engagement is strongest in decision-making and participatory roles, and institutional collaboration is most pronounced in joint planning and program development, both are instrumental in sustaining high levels of program effectiveness. The findings underscore that strategic planning, participatory governance, and evaluative practices are key drivers of successful program implementation, whereas resource allocation and formalized partnerships may require targeted enhancement. From a school-based governance perspective, these results highlight the necessity of fostering inclusive participation, strengthening inter-agency networks, and ensuring that collaborative planning is supported by adequate resources. Collectively, the study affirms that integrated stakeholder engagement and institutional coordination are central to achieving sustainable, effective, and resilient school-based programs in the context of elementary education.

## DISCUSSION

This section presents a comprehensive discussion of the study's findings on community engagement, institutional collaboration, and the effectiveness of school-based program implementation in elementary schools in Zone 2, integrating descriptive, correlational, and regression analyses. The discussion is contextualized within the framework of School-Based Management (SBM), emphasizing the role of participatory governance and collaborative institutional mechanisms in enhancing program outcomes.

As presented in Table 1, the results indicate a high level of community engagement, with an overall weighted mean of 3.71, interpreted as strongly engaged. This finding suggests that stakeholders in these elementary schools actively participate in initiatives and perceive themselves as integral partners in program implementation. Notably, decision-making and consultation ranked highest (WM = 3.75), indicating that community members are meaningfully involved in consultative processes that shape school priorities and plans. This aligns with Epstein and Sheldon (2016) and Jeynes (2018), who argue that participatory governance enhances transparency, accountability, and alignment between school programs and local needs. Similarly, participation in school activities (WM = 3.70; Rank 2) highlights the visible involvement of stakeholders in school functions, consistent with Fullan's (2016) assertion that active engagement strengthens the implementation fidelity of school-based initiatives. Conversely, resource support and contribution, ranking lowest (WM = 3.67; Rank 3), reflects potential contextual constraints, such as limited household income or community capacity, which may restrict material contributions despite strong participatory commitment. This pattern suggests that effective school governance relies more on inclusive decision-making and participatory engagement than solely on financial or material support, echoing findings from Cordial (2025a) in rural Philippine schools. However, some studies (Jeynes, 2018)

suggest that in highly resource-constrained contexts, lack of material support can moderately constrain program implementation, indicating that participation alone is insufficient in the absence of adequate resources.

Turning to Table 2, the findings indicate that institutional collaboration is practiced to a very great extent (overall WM = 3.72). Joint planning and program development emerged as the highest-ranked indicator (WM = 3.77), highlighting the emphasis on collective goal setting, strategic alignment, and coordinated program design. This finding supports Bryson et al. (2016) and Leithwood et al. (2020), who contend that structured inter-agency collaboration enhances coherence, reduces duplication of efforts, and strengthens program sustainability. While inter-agency partnerships and linkages ranked lowest (WM = 3.71), the results suggest that formalized networks may be less consistently institutionalized across schools. Resource and technical assistance sharing (WM = 3.67; Rank 2) was also slightly constrained, indicating that while technical collaboration is robust, it may be limited by institutional capacity. These results mirror Datnow and Park (2018), who note that institutional support often varies in quality and intensity, particularly in schools with limited access to external resources. Nevertheless, the overall findings affirm that institutional collaboration—especially in strategic and planning-oriented activities—remains a critical driver of program effectiveness.

As indicated in Table 3, the overall level of program implementation effectiveness was highly effective (WM = 3.76). Planning scored highest (WM = 3.83), underscoring the prioritization of systematic program design and goal setting, which serve as a foundation for successful implementation (Caldwell, 2016; Gertler et al., 2017). Monitoring and evaluation (WM = 3.77; Rank 2) also received high scores, reflecting schools' commitment to assessing program progress and adapting interventions accordingly. Resource allocation, while still highly effective (WM = 3.67; Rank 3), ranked lowest, implying that limitations in financial,

human, or material resources may constrain optimal implementation, consistent with Fullan's (2016) observation that effective SBM requires adequate resource support alongside participatory governance. Collectively, these results suggest that strategic planning and evaluative mechanisms are the principal contributors to program effectiveness, with resource allocation representing a potential area for further capacity building.

Correlational analyses (Tables 4 and 5) revealed strong, positive, and statistically significant relationships between community engagement ( $r = 0.724$ ,  $p < 0.001$ ) and institutional collaboration ( $r = 0.704$ ,  $p < 0.001$ ) with program implementation effectiveness. These findings are consistent with Epstein and Sheldon (2016) and Khalifa et al. (2019), who assert that participatory stakeholder involvement and structured inter-institutional collaboration enhance program coherence, responsiveness, and sustainability. Conversely, some studies (Jeynes, 2018) note that overly formalized collaboration can occasionally introduce bureaucratic delays, suggesting that optimal effectiveness is achieved when collaboration is both structured and flexible.

The multiple regression results (Table 6) further indicate that community engagement ( $B = 0.412$ ,  $p < 0.001$ ) and institutional collaboration ( $B = 0.368$ ,  $p = 0.001$ ) significantly and positively predict program implementation effectiveness. Community engagement emerged as the stronger predictor, highlighting the centrality of participatory decision-making and consultative involvement. Institutional collaboration also exerted a meaningful influence, reinforcing the complementary nature of these mechanisms in driving program success. These results corroborate SBM theory, which posits that devolved decision-making, supported by active stakeholder participation and inter-agency cooperation, improves program outcomes (Caldwell, 2016; Gertler et al., 2017).

Taken together, the study demonstrates that community engagement and institutional collaboration are critical, interdependent

drivers of program effectiveness in elementary schools. Community engagement is most influential in decision-making and participatory roles, while institutional collaboration is strongest in joint planning and program development. The results suggest that fostering inclusive participation and structured partnerships strengthens strategic planning, monitoring, and program delivery, even in contexts with limited resource availability. From a governance perspective, these findings underscore the need for schools to institutionalize participatory processes, optimize resource mobilization, and sustain collaborative networks. This evidence supports SBM frameworks by demonstrating that integrated stakeholder engagement and cross-institutional coordination are essential for achieving sustainable, effective, and resilient school-based programs, particularly in geographically isolated and resource-constrained settings such as Zone 2 of Catanduanes.

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