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THE ROLE OF EDUCATIONAL INSTITUTIONS IN SUSTAINABLE COMMUNITY DEVELOPMENT: EVIDENCE FROM THE ROI KAEN SARASIN PROVINCIAL CLUSTER

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ABSTRACT

This study examined whether schools genuinely contribute to community development across the Roi Kaen Sarasin cluster in northeastern Thailand. Data were collected from 345 school administrators across four provinces using stratified proportional sampling and a structured questionnaire with high reliability (Cronbach's $\alpha = 0.927$). The findings confirm that schools play a significant role in community development, although the degree of influence varies considerably among provinces. Multiple regression analysis produced a correlation coefficient of $R = 0.964$ and a coefficient of determination of $R^2 = 0.884$, indicating that the model explains approximately 88% of the observed variance. Among the provinces studied, Kalasin demonstrated the strongest influence on community development ($\beta = 0.210$), followed by Khon Kaen ($\beta = 0.184$), Mahasarakham ($\beta = 0.163$), and Roi Et ($\beta = 0.159$).

Importantly, the findings reveal not only differences in provincial rankings but also substantial disparities in the magnitude of institutional influence. The gap between the highest- and lowest-performing provinces was more than twofold, suggesting that these differences are not merely statistical variations but instead reflect meaningful distinctions in institutional practices and community engagement. Specifically, the results indicate that schools with stronger community responsiveness, broader collaborative networks, and a sustained commitment to the practical implementation of sustainability initiatives tend to exert a greater developmental impact. Although predictive equations were developed in this study, the broader implication is that institutional influence does not occur automatically; rather, it must be intentionally cultivated through continuous engagement, collaborative partnerships, and sustainable educational practices.

Keywords: educational institutions, sustainable development, community development, Roi Kaen Sarasin Province Cluster, Thailand



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Introduction

Thai education has long maintained a complex and contested relationship with the communities it is intended to serve. For centuries, the Buddhist temple (*wat*) functioned as the primary institutional site of learning, wherein monastics transmitted not only literacy and moral reasoning but also the accumulated social and cultural knowledge of local communities rendering the community itself, in effect, the living curriculum. This organic pedagogical relationship began to erode following the enactment of the National Education Act of 1921, which institutionalized a centralized, Western-oriented model of schooling under the reign of King Rama VI. The introduction of standardized curricula and hierarchical administrative structures progressively widened the distance between formal educational provision, and the contextual knowledge demands of local communities (Baker & Phongpaichit, 2005)

This structural misalignment has persisted over subsequent decades. Rather than diminishing, the disjunction has been further exacerbated by processes of globalization, which have accelerated the penetration of foreign value systems and consumption patterns into Thai society while formal schooling has remained largely insulated from indigenous local wisdom (Phakongsil, 2009) The historically reinforcing triad of home, temple, and school once constitutive of a coherent socialization system has undergone considerable fragmentation. As Phrakrupalad Suriya Chavanapanyo and Prawit Thongchai (2023) observe, the communal reciprocity and social cohesion that once characterized Thai village life are now subject to significant institutional strain. Legislative reform was explicitly intended to address this condition. The National Education Act of 1999 articulated a reconceptualization of education as a lifelong and holistic process, one oriented towards cultural preservation, adaptive innovation, and civic engagement rather than the mere transmission of academic content. The Act mandated the integration of formal, non-formal, and informal learning modalities, and called for substantive participation from both the private sector and community constituencies (Office of the National Education Commission, 1999). Sustainable development was positioned as a foundational organizing principle: social advancement, economic stability, and environmental stewardship were construed as mutually constitutive rather than competing policy objectives (Ngourungsi, 2016). Nevertheless, a persistent gap remains between legislative intent and institutional practice. Educational institutions in many localities have yet to realize their envisioned role as anchors of community development. Phra Thanongsak Duenkhntod, (2017) contends that experiential, community-embedded learning is indispensable to the cultivation of adaptive problem-solving capacities competencies that conventional standardized instruction is ill-equipped to produce. For schools to function as meaningful bridges between formal knowledge and lived community experience, corresponding transformations in organizational culture, inter-institutional partnerships, and educational leadership are required.



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Research Objectives

We had one primary objective: to examine the influence of educational institutions on sustainable community development within the Roi Kaen Sarasin provincial cluster. But along the way, we also wanted to know why some provinces outperform others.

Conceptual Framework of Research

Five theoretical perspectives anchor this study. We did not invent them we borrowed them, but they fit.

First, functionalist theory (Muthamedha, 1999) treats educational institutions as social structures that perform essential cultural and integrative functions - transmitting norms, supporting social cohesion, and enabling individual development.

Second, sustainable development theory (Ngourungsi, 2016) provides the outcome framework, emphasizing that social, economic, and environmental dimensions must advance together.

Third, the community-based education concept draws on Thailand's historical experience, recognizing that learning rooted in local context as practiced during the Sukhothai period - tends to be more durable and meaningful than purely academic instruction (Wyatt, 1969)

Fourth, Thailand's Sufficiency Economy Philosophy adds a cultural grounding, stressing moderation, resilience, and the integration of moral reasoning into development practice (NESDC, 2017).

Finally, participatory development theory highlights the importance of community agency in decision-making - a value the cluster's governance model explicitly endorses (Wuttiapreechakit, 2019).

Figure 1 (see original) shows how we put these together.

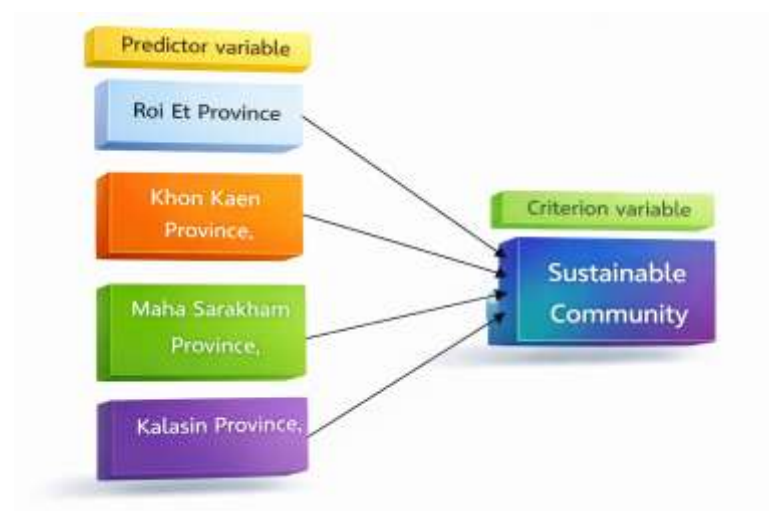


Figure 1 Conceptual Framework



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Scope of Research

(1) Content Scope

We focused on the role of educational institutions as key drivers of sustainable community development. The conceptual foundation is grounded in the five perspectives above. We operationalized "sustainable community development" as a balanced integration of social, economic, and environmental dimensions (Ngourungsi, 2016), with community participation (Wuttiapreechakit, 2019) and local knowledge integration (Wyatt, 1969) as mediating mechanisms.

(2) Geographic Scope

The study was conducted within the Roi Kaen Sarasin provincial cluster in northeastern Thailand, which consists of four provinces: Roi Et, Khon Kaen, Maha Sarakham, and Kalasin.

(3) Population and Sample Scope

The population included all educational institution administrators within these four provinces. We selected a sample of 345 participants - school administrators, deputy administrators, and designated representatives - using proportional stratified random sampling. Sample size was determined by the Krejcie and Morgan (1970) table.

Research Procedure

The research procedure was conducted in the following sequential steps:

1. Research Instruments

We collected data using a structured questionnaire based on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). Items were drawn from relevant theory and literature on sustainable development, educational institutions as social institutions, and community-based education. Data collection took place between October 2025 and January 2026.

2. Instrument Validation

2.1 Validity Testing

Content validity was assessed using the Index of Item-Objective Congruence (IOC). A panel of five experts evaluated each item. IOC values ranged from 0.60 to 1.00, indicating acceptable alignment with the study constructs (Rovinelli & Hambleton, 1977)

2.2 Reliability Testing

We piloted the questionnaire with 30 respondents who shared similar characteristics with the target sample but were not included in the main study. Cronbach's alpha coefficient was 0.876, indicating high internal consistency (Cronbach, 1951)



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3. Data Analysis and Statistical Methods

We used two main approaches. First, Pearson's product-moment correlation coefficient to analyze relationships between independent variables (educational institutions in each province) and the dependent variable (sustainable community development). Second, multiple regression analysis (enter method) to examine the predictive power of each independent variable. Statistical significance was set at the 0.05 level (Hair et al., 2010)

Research Findings

The Results of the Study: The Influence of Educational Institutions on Their Role in Sustainable Community Development

This study examined the opinions of school administrators regarding their role in driving collaborative mechanisms for sustainable community development in the Roi Kaen Sarasin cluster. Pearson's correlation coefficient was used to analyze the relationships between the predictor variables and the criterion variable to address the research objectives and test the study's hypotheses. The results are presented in Table 1

Table 1: Pearson Correlation Analysis of the Role of Educational Institutions in Sustainable Community Development in the Roi Kaen Sarasin Provincial Cluster

	ROI	KHO	MAH	KAS	CSD
ROI	1.000	0.662**	0.425**	0.571**	0.755**
KHO		1.000	0.777**	0.741**	0.765**
MAH			1.000	0.790**	0.768**
KAS				1.000	0.802**
					1.000

** Statistical significance at the level 0.01

Table 1 shows the Pearson correlation analysis. All variable pairs were positively related, with coefficients ranging from 0.425 to 0.790 - moderate to high associations. All correlations were statistically significant at the 0.01 level. The strongest relationships were between Kalasin (KAS) and overall sustainable community development (CSD) ($r = 0.802$), followed by Maha Sarakham ($r = 0.768$) and Khon Kaen ($r = 0.765$). Roi Et had the lowest correlation with CSD ($r = 0.755$)

To further examine the influence of educational institutions on their role in driving cooperative mechanisms for sustainable community development in the Roi Kaen Sarasin provincial cluster, multiple regression analysis was conducted using the enter method to test the research hypotheses. The results are presented in Table 2



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Table 2: Multiple Regression Analysis of the Influence of Educational Institutions on Sustainable Community Development in the Roi Kaen Sarasin Provincial Cluster

variable	b	SE _b	β	t	β rank
constant (a)	0.190	0.052		4.033**	
roi et (ROI)	0.101	0.030	0.159	4.993**	4
Khon Kaen (KHO)	0.260	0.039	0.184	5.387**	2
Maharakham (MAH)	0.240	0.035	0.163	4.549**	3
Kalasin (KAS)	0.457	0.032	0.210	5.807**	1
R = 0.964, R ² = 0.884, Adjusted R ² = 0.873, F = 505.221, Sig = .000*					

*Statistically significant at the level 0.05

Table 2 presents multiple regression results. The predictor variables - Roi Et (ROI), Khon Kaen (KHO), Maha Sarakham (MAH), and Kalasin (KAS) - significantly influenced sustainable community development. The multiple correlation coefficient was high (R = 0.964), with a coefficient of determination (R² = 0.884), F = 57.534, and Sig. = 0.000. Collectively, the four predictor variables explained 88.40% of the variance in sustainable community development.

Looking at standardized regression coefficients (β), Kalasin showed the greatest influence (β = 0.210), followed by Khon Kaen (β = 0.184), Maha Sarakham (β = 0.163), and Roi Et (β = 0.159). All were statistically significant at the 0.000 level.

Prediction equations (raw and standardized scores):

$$\hat{Y} = 0.190 + 0.101(\text{ROI}) + 0.260(\text{KHO}) + 0.240(\text{MAH}) + 0.457(\text{KAS})$$

$$\hat{Z} = 0.159(\text{ROI}) + 0.184(\text{KHO}) + 0.163(\text{MAH}) + 0.210(\text{KAS})$$

Summary of the Research Findings

The findings of this study provide compelling evidence that educational institutions play a critical and influential role in advancing sustainable community development within the Roi Kaen Sarasin provincial cluster. More specifically, the results demonstrate that these institutions serve not only as centers of knowledge transmission but also as key drivers of collaborative mechanisms that underpin sustainable development initiatives. Collectively, the evidence suggests that the capacity of educational institutions to integrate local knowledge, foster cross-sector collaboration, and promote community engagement significantly enhances the effectiveness and sustainability of development outcomes across the region.



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Discussion

Coming into this study, we expected that all four provinces would matter, but we did not expect the coefficient for Kalasin ($\beta = 0.461$) to be more than double that of Roi Et ($\beta = 0.219$). That gap is large enough to ask a different question: what is Kalasin doing that Roi Et is not?

Kalasin ($\beta = 0.210$): not just participation, but ownership:

We suspect Kalasin's lead comes from something that surveys struggle to capture. UNESCO Bangkok (2016) called it "community ownership." In Kalasin, that looks less like a policy and more like a habit: teachers eat lunch at villagers' homes; villagers sit on school committees that actually meet. Wongchantra and Nuntasomboon (2022) documented similar patterns in Lamphun sub-district - environmental education works there because the community sees it as *theirs*, not the schools. That is harder to replicate than a training manual, but it may explain why Kalasin's beta is not just highest but meaningfully higher.

Khon Kaen ($\beta = 0.184$): the university effect:

Khon Kaen's ranking did not surprise us. Having a major research university in the province creates structural advantages that the other three provinces lack. Khon Kaen University's PLC and CREATE frameworks (Khon Kaen University, 2017) give schools access to continuous training, international partnerships (Suwanmaneepong et al., 2024), and a culture where "evidence-based" is not just a slogan. That said, we are cautious: university presence helps, but Maha Sarakham also has a large university (Mahasarakham University, 2023) and ranks third, not second. So, size alone is not the answer.

Maha Sarakham ($\beta = 0.163$): capacity without coordination:

This is where our findings get interesting - and a bit frustrating. Maha Sarakham has Sufficiency Economy Learning Centers (Chudam et al., 2024), Buddhist environmental ethics in school curricula (Rungmanee & Suwancharoen, 2024), and a regional university. So why is its coefficient lower than Khon Kaen's? The literature from UNESCO Bangkok (2020) and the province's own reports (Maha Sarakham Province, 2022) point to a coordination problem. Good things are happening, but they happen in silos. Schools, temples, and local government agencies do not talk to each other systematically. That is not a resource problem - it is a network problem.

Roi Et ($\beta = 0.159$): the outlier that teaches us something:

We will be honest: we did not expect Roi Et to rank last by this margin. And we do not think the province is "failing." What we see instead is a structural constraint. Roi Et has lower urban density and a more dispersed institutional network than Khon Kaen or Kalasin. Coordination is simply harder when schools are far apart and when no single anchor institution (like a large university) exists. Phuangsuan et



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al. (2025) found similar patterns in other rural Thai contexts - local knowledge exists but is underutilized, not because people reject it but because collaborative frameworks do not reach them.

An unexpected finding:

What surprised us most is not the ranking itself but how poorly the four-province cluster governance model (Northeast Central Province Group, 2022) seems to have reduced these disparities. If the cluster was designed to promote coordination, why are the four provinces diverging rather than converging? We do not have a good answer from our data. That may be a question for a different study - maybe qualitative, maybe political-economic.

Recommendations for Future Research

1. Implementation Suggestions (for policymakers and school administrators)

Reposition schools as community learning hubs. Schools should expand beyond formal instruction - serving as knowledge and innovation centers that integrate academic content with local wisdom, offering non-formal and informal learning opportunities, and facilitating community-based problem-solving on issues such as environmental management and local economic development.

2. Suggestions for Further Research

First, a qualitative follow-up is already on our minds. Numbers tell us *that* Kalasin leads, but they do not tell us *how*. Sitting in village meetings, interviewing school directors, and watching how decisions actually get made - that would fill the gap.

Second, a longitudinal design. Our data are cross-sectional (October 2025 – January 2026). We cannot tell whether schools *cause* development or whether developed communities *attract* better schools. That distinction matters for policy.

Third, comparative studies across other Thai clusters - and eventually across ASEAN - would tell us whether what we found in the northeast is unique or general. The 20-Year National Strategy (2018–2027) assumes generalizability. We are not so sure.

Finally, we would measure things our survey missed: political economic factors, informal leadership (especially religious figures), and the role of digital infrastructure. These are not afterthoughts. They may be the 11.6% variance we could not explain.

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