



Stakeholders' Engagement and Performance of Educational Projects: A Case of Teacher Training Project in Kamonyi District, Rwanda

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Abstract: This study examined stakeholders' engagement and performance of the Teacher Training Project in Kamonyi District, Rwanda, through three objectives: interactive, functional and opportunistic engagement. A descriptive and correlational research design combined questionnaires and documentary review. The population of 551 comprised 84 head teachers, 12 sector education inspectors, 416 trained teachers, 22 project staff, two district education officials and 15 project partners. The sample of 232 comprised 36, five, 175, nine, one and six respondents from these groups, respectively; 214 completed questionnaires were analysed. A 23-person pilot in Gisagara District informed instrument refinement. Expert review yielded a content validity index of 1.00 for each construct; Cronbach's alpha ranged from 0.81 to 0.89. IBM SPSS Statistics Version 29 supported descriptive, correlation and regression analyses. Interactive engagement was very high ($M = 4.37$, $SD = 0.88$) and a significant positive predictor of perceived performance ($B = 0.319$, $p < 0.001$). Functional engagement was very high ($M = 4.24$, $SD = 0.88$) and also significant ($B = 0.391$, $p < 0.001$). Opportunistic engagement scored 3.42 ($SD = 1.33$) but was not a significant independent predictor ($B = 0.056$, $p = 0.082$). The model explained 51.7% of performance variance. The study concluded that interactive and functional engagement were associated with stronger perceived performance, without establishing causation. Project managers and district officials should strengthen feedback, clarify duties and monitor missed activities.

Keywords: Stakeholders' Engagement, Interactive Engagement, Functional Engagement, Opportunistic Engagement, Project Performance, Teacher Training Project

How to cite this work (APA):

Muhire, C., Bashaija, W. & Ngunjiri, S. (2026). Stakeholders' Engagement and Performance of Educational Projects: A Case of Teacher Training Project in Kamonyi District, Rwanda. *Journal of Research Innovation and Implications in Education*, 10(4), 621 – 632. <https://doi.org/10.59765/bvy21>

1. Introduction

Educational project performance concerns the delivery of planned activities, training quality, timeliness and stakeholder satisfaction. These outcomes depend in part on how teachers, school leaders, district officials and project partners participate in decisions and implementation. Stakeholders' engagement may take an interactive form through dialogue and feedback, a functional form through assigned roles and technical contributions, or an opportunistic form through selective involvement. The study examined these dimensions in

relation to project performance (Singh & Choudhary, 2023; Sishi & Rangongo, 2022).

Interactive engagement allows project actors to raise implementation problems and agree on adjustments. Functional engagement assigns responsibility for organising training, supervising delivery and following up classroom practice. Opportunistic participation, when it occurs irregularly or for individual benefit, may weaken consistency. Existing research links collaborative engagement and role clarity to stronger educational project outcomes, although the three forms have not always been studied together (Prabowo & Sari, 2022; Oladipo & Afolayan, 2024).

Project performance is therefore evaluated alongside the quality and continuity of stakeholders' participation. In teacher training, dialogue can make content more relevant, while clear duties can keep sessions and follow-up on schedule. Examining these relationships separately provides a way to identify which engagement practices are associated with performance in the Kamonyi District project.

Globally, teacher development remains central to education quality. UNESCO and the International Task Force on Teachers for Education 2030 (2024) estimate that 44 million additional primary and secondary teachers are needed by 2030. This shortage concerns the wider teaching profession rather than performance of the Kamonyi project. It highlights why training initiatives need coordinated support from teachers, school leaders and education authorities.

The same global report identifies sub-Saharan Africa as the region with the largest teacher requirement, estimated at 15 million by 2030 (UNESCO & International Task Force on Teachers for Education 2030, 2024). Regional capacity pressures make sustained professional support important. In this context, interactive engagement concerns communication about training needs, while functional engagement concerns the responsibilities through which training and follow-up are delivered.

International survey evidence also places professional collaboration within teacher development. Results from TALIS 2024 discusses professional relationships and collaborative learning across participating education systems (OECD, 2025). Such evidence informs the rationale for examining dialogue and coordinated participation, but cannot establish the performance of a Rwandan district project.

In Rwanda, the Teacher Development and Management Policy sets implementation priorities for 2025/26–2029/30, including stakeholder coordination, mentoring, continuing professional development and teacher communities of practice (Ministry of Education [MINEDUC], 2024). These are current policy priorities, not measured 2025/26 project outcomes. They connect national teacher development to the interactive and functional engagement examined in this study.

AIMS Rwanda describes its Teacher Training Programme as having started in 2018 and operating in 14 districts to support mathematics and science teaching (African Institute for Mathematical Sciences [AIMS], n.d.). Kamonyi is the implementation setting examined here. The study's local population frame records 551 stakeholders, including 416 trained teachers, as detailed in Table 3.1. National programme coverage and this local research population serve different purposes and should not be conflated.

1.2 Statement of the Problem

The research problem was an evidence gap concerning how different forms of stakeholders' engagement were associated with performance of the Teacher Training Project in Kamonyi District. National standards provide a common programme framework; this study does not assume that project performance differs between districts. AIMS reports programme operations in 14 districts, rather than every district in Rwanda (AIMS, n.d.).

Recent Rwandan research reports improvements in teachers' techno-pedagogical skills following Teacher Training Programme interventions (Mukagihana et al., 2024) and gains in pedagogical content knowledge following continuing professional development (Nkundabakura et al., 2024). However, these studies primarily examine teacher learning. They do not jointly estimate the separate relationships of interactive, functional and opportunistic engagement with the performance measures used in this Kamonyi study.

Kabarungi and Irechukwu (2023) examined participation in a different donor-funded education project, while Mugabo and Wanjiku (2023) studied stakeholder engagement and school-based mentorship sustainability in Ngoma District. Their evidence supports investigating participation but differs in programme, location and outcome. The gap was therefore project-specific evidence, rather than proof of a national programme failure.

The central problem was the lack of project-specific evidence on which forms of stakeholders' engagement accompanied stronger performance. Without this distinction, project administrators have limited guidance on whether to prioritise dialogue, role coordination or safeguards against irregular participation.

1.1 General Objective

The purpose of the study was to determine the effect of stakeholders' engagement on performance of the Teacher Training Project in Kamonyi District, Rwanda.

1.2 Specific Objectives

- To examine the effect of interactive engagement on performance of the Teacher Training Project in Kamonyi District, Rwanda.
- To assess the effect of functional engagement on performance of the Teacher Training Project in Kamonyi District, Rwanda.
- To determine the effect of opportunistic engagement on performance of the Teacher Training Project in Kamonyi District, Rwanda.

2. Literature Review

This chapter reviews the theoretical explanations of stakeholders' engagement and empirical findings for the three engagement dimensions in relation to project performance.

2.1 Theoretical Review

Stakeholder Theory, Participatory Development Theory, Social Capital Theory and the Theory of Planned Behaviour provide explanations for the study's engagement dimensions and their possible relationship with project performance.

2.1.1 Stakeholder Theory

According to Edward Freeman's 1984 book *Strategic Management: A Stakeholder Approach*, Stakeholder Theory was first put out by Freeman. Freeman argued that groups that may affect or be affected by an organization's actions are part of the network of interaction within which the organization functions.

The theory shifted focus from shareholder-centered management to a broader responsibility framework that considers diverse stakeholders such as communities, employees, funders, and beneficiaries (Schneider & Müller, 2023). Its foundation rests on ethical decision-making, inclusive participation, and balancing competing stakeholder interests. This theory has since become a central framework in project management, public administration, and development studies (Freeman et al., 2022).

Over the years, Stakeholder Theory expanded into normative, descriptive, and instrumental dimensions. The normative dimension stresses the moral responsibility of organizations to consider stakeholder needs; the descriptive aspect explains how organizations naturally interact with stakeholders; and the instrumental dimension links stakeholders' engagement to organizational performance outcomes (Freeman et al., 2022). Scholars have applied the theory to education, health, and public-sector development projects to explain how engagement practices influence effectiveness. It highlights that projects are more likely to succeed when stakeholders are actively consulted and empowered (Schneider & Müller, 2023).

Contemporary applications emphasize structured engagement mechanisms such as collaboration forums, participatory planning, and shared monitoring spaces (Schneider & Müller, 2023). The theory underscores that engagement quality especially active, interactive, functional, and opportunistic behaviors shapes project relevance and community ownership. Within education, it supports the idea that project success depends on

systematic participation across levels, from parents to district officials (Sishi & Rangongo, 2022).

Stakeholder Theory informed all three objectives by treating teachers, school leaders, officials and partners as actors whose contributions can shape project performance. It was especially relevant to the first objective on interactive participation and the second on functional responsibilities.

2.1.2 Theory of Participatory Development

Theory of Participatory Development emerged through the work of Robert Chambers in 1983, whose publications reshaped thinking around community involvement in development processes (Prabowo & Sari, 2022). Chambers argued that sustainable outcomes require shifting power from external experts to local communities who possess contextual knowledge. The theory emphasized participation, empowerment, dialogue, and local ownership as pillars of successful development interventions. Its influence extended across agriculture, health, education, and governance sectors, advocating for inclusive planning and implementation practices (Singh & Choudhary, 2023).

Collective problem-solving, communal diagnosis, and shared decision-making are some of the ideas that the theory adopted as it developed. Participatory frameworks highlighted that engagement must be continuous not a one-time consultation to ensure alignment between project intentions and community needs (Singh & Choudhary, 2023). The theory points out that meaningful interaction enhances accountability and reduces implementation resistance. Increasingly, scholars have used this framework to analyze education programs, particularly those involving parents and community leaders (Prabowo & Sari, 2022).

The theory also stresses functional and interactive engagement as necessary for ensuring equitable representation. It critiques opportunistic engagement, where stakeholders selectively participate only when benefits are present, arguing that such behaviors undermine sustainability. Modern interpretations integrate participatory monitoring and evaluation as critical components of project performance management (Oladipo & Afolayan, 2024).

Participatory Development Theory supported the first objective by explaining dialogue and shared decisions, and the second by explaining sustained contributions to implementation. It also provided a basis for considering how selective participation under the third objective might weaken ownership.

2.1.3 Social Capital Theory

In his seminal 1993 study *Making Democracy* study, Robert Putnam developed Social Capital Theory by

analyzing the ways in which norms, trust, and networks promote cooperation. Putnam argued that communities with strong social capital achieve better development and governance outcomes (Muchemi & Gachahi, 2022). The theory focuses on bonding, bridging, and linking social capital each representing varying forms of relationships that support collective action. Educational projects, community initiatives, and local governance systems often rely heavily on these social forces (Muchemi & Gachahi, 2022).

The theory has been expanded to emphasize how trust and cooperative relationships reduce transaction costs and enhance collaborative performance (Mshana & Joseph, 2022). In development contexts, social capital strengthens community engagement, improves communication, and reduces opportunistic behaviors. Where stakeholders maintain strong ties, shared norms promote better compliance with project activities. Conversely, weak social capital leads to disengagement, conflict, and implementation delays (Järvinen & Rantala, 2023).

More recent scholarship highlights the role of social capital in stakeholder coordination, collaborative learning, and participatory decision-making in schools. Educational projects that foster trust between teachers, parents, and administrators tend to achieve stronger performance outcomes. Thus, the theory supports analyzing how relational factors influence engagement behaviors (Mshana & Joseph, 2022).

Social Capital Theory linked the first and second objectives to trust, communication and coordinated networks. It also helped interpret whether weaker ties might allow irregular participation under the third objective.

2.1.4 Theory of Planned Behavior

Theory of Planned Behavior (TPB) was introduced by Icek Ajzen in 1991, following on from his earlier work on Theory of Reasoned Action (TORA). Attitudes, subjective standards, and perceived behavioral control are the three factors that Ajzen posited as driving human behavior (Diop & Mbaye, 2024). According to the idea, people act in a certain way when they have faith in the good consequences, when they see support for the action from others, and when they are confident in their own abilities. The fields of psychology, medicine, teaching, and organizational behavior studies have all made extensive use of TPB (Abdullah & Watkins, 2023).

Scholars have used Theory of Planned Behavior to explain participation patterns in community programs, organizational decision-making, and public-sector projects (Villanueva, 2022). The theory is particularly useful in understanding why stakeholders choose to actively or opportunistically engage in project processes. It highlights that engagement is shaped by personal

beliefs, social pressures, and perceived ability to influence project outcomes. In educational settings, TPB helps explain variations in teacher participation, parental involvement, and community engagement (Diop & Mbaye, 2024).

The theory also supports the assessment of strategies that enhance positive attitudes toward participation, strengthen social norms for collaborative involvement, and improve stakeholders' perceived control in project processes. Such conditions increase the likelihood of active and functional engagement, while reducing opportunistic patterns (Villanueva, 2022).

The Theory of Planned Behaviour informed the third objective by considering how attitudes, expectations and perceived control may shape selective participation. It offered an interpretive explanation, not a separate measured variable in the regression model.

2.2 Empirical Review

Mukagihana et al. (2024) surveyed 351 mathematics and science teachers in the programme's 14 districts and reported improved techno-pedagogical skills following training. The evidence is directly relevant to the programme but relies on teacher reports and does not isolate the three engagement dimensions. It therefore informs context rather than supplies an estimate of their independent relationships with performance.

Nkundabakura et al. (2024) used an explanatory sequential design with 290 teachers in testing and 20 in interviews to examine continuing professional development in Rwanda. They reported gains in pedagogical content knowledge. Their focus on teacher learning differs from the perceived project-performance outcome here; the study does not directly answer the three engagement questions.

Kabarungi and Irechukwu (2023) used a descriptive and correlational design with a sample of 96 from 126 stakeholders in a donor-funded education project. Interactive and functional participation were significant, whereas passive participation was not. Questionnaire and documentary evidence offered relevant Rwandan context, but programme differences and the distinct passive construct limit direct comparison. Mugabo and Wanjiku (2023) similarly examined engagement and school-based mentorship sustainability in Ngoma, rather than the combined model used in Kamonyi.

2.2.1 Interactive Engagement and Performance of Educational Project

Villanueva (2022) examined interactive engagement practices in school-based management projects in Philippines to determine their effect on project performance. The research examined the impact of teamwork and two-way communication on project

outcomes by administering a quantitative survey to 342 educators and parents. The findings showed that there was a strong positive correlation between being involved in the project and its success ($r = 0.68$, $p < 0.01$), which implies that two-way communication greatly improved the results of the implementation. The regression model indicated that interactive participation explained 46 percent of the variation in project performance ($R^2 = 0.46$). The research indicated that interactive forums and collaborative planning sessions enhanced openness and accountability. The study's different programme context limits transfer to Kamonyi teacher training. Reported observational associations do not demonstrate causation; the current study therefore tests the relevant engagement dimension within its own setting.

Nshimiyimana and Uwitonze (2023) investigated how interactive engagement influenced performance within TVET infrastructure development projects in Kicukiro District. Using a sample of 188 respondents, the researchers assessed the role of feedback loops and participatory review meetings in project delivery outcomes. The regression analysis showed a significant contribution of interactive engagement to project performance ($\beta = 0.58$, $p < 0.01$). Projects that used continuous interactive communication registered higher satisfaction scores) regarding quality and timeliness. The study's different programme context limits transfer to Kamonyi teacher training. Reported observational associations do not demonstrate causation; the current study therefore tests the relevant engagement dimension within its own setting.

2.2.2 Functional Engagement and Performance of Educational Project

An Indonesian research by Prabowo and Sari (2022) looked at how digital learning initiatives in schools fared when functional stakeholders were included. The researchers surveyed 312 teachers and school committee members, applying regression analysis to assess how role clarity and task coordination influenced project success. Findings revealed that functional engagement significantly predicted project performance ($\beta = 0.54$, $p < 0.01$), with respondent ratings showing a high mean of 4.12 for coordinated task execution. The model accounted for 41% of the variation in project results ($R^2 = 0.41$). According to the results, operational delays were decreased and implementation efficiency was enhanced by clearly defined functional responsibilities. The study's different programme context limits transfer to Kamonyi teacher training. Reported observational associations do not demonstrate causation; the current study therefore tests the relevant engagement dimension within its own setting.

A study in Ethiopia by Bekele and Tadesse (2022) examined how functional engagement influenced outcomes in school feeding program projects coordinated between government agencies and local

communities. Using a sample of 243 respondents, the authors assessed the impact of role clarity and structured coordination on project effectiveness. Regression analysis confirmed the predictive impact of functional engagement on performance ($\beta = 0.51$, $p < 0.01$), along with the positive connection between the two ($r = 0.62$). There was a 33% decrease in supply shortages at schools with strong functional coordination compared to those with poor coordination. The research found that functional role alignment improved program sustainability and efficiency. The study's different programme context limits transfer to Kamonyi teacher training. Reported observational associations do not demonstrate causation; the current study therefore tests the relevant engagement dimension within its own setting.

2.2.3 Opportunistic Engagement and Performance of Educational Project

Rahman and Akter (2022) investigated opportunistic engagement among school committees during the implementation of community-led education improvement projects in Bangladesh. The researchers surveyed 319 respondents to understand how selective or short-term stakeholder involvement influenced project outcomes. Their regression analysis demonstrated that opportunistic engagement negatively predicted project performance ($\beta = -0.42$, $p < 0.01$), showing that inconsistent involvement reduced monitoring quality and slowed activity completion. Based on these findings, the authors concluded that opportunistic involvement weakened accountability mechanisms. The study's different programme context limits transfer to Kamonyi teacher training. Reported observational associations do not demonstrate causation; the current study therefore tests the relevant engagement dimension within its own setting.

Hakizimana and Mugabo (2023) focused on opportunistic engagement within teacher-support and mentorship projects in Huye District. Using a sample of 164 teachers and project coordinators, the study assessed how unpredictable stakeholder involvement influenced program effectiveness. The results confirmed that inconsistent involvement hampered assistance delivery, since there was a substantial negative association between opportunistic engagement and project outcomes ($r = -0.64$). Projects with opportunistic decision-making patterns recorded lower satisfaction scores (mean = 3.02) compared to well-coordinated teams. The authors concluded that opportunistic involvement disrupted feedback mechanisms and slowed project implementation cycles. The study's different programme context limits transfer to Kamonyi teacher training. Reported observational associations do not demonstrate causation; the current study therefore tests the relevant engagement dimension within its own setting.

3. Methodology

3.1 Research Design

Research was conducted using a descriptive and correlational methodology. The descriptive part of the report detailed the current stakeholder participation levels within the Kamonyi District Teacher Training Project. The correlational component determined the statistical relationship between engagement dimensions and project performance. This design allowed identification of patterns and prediction of outcomes using regression analysis. The design aligns with studies examining behavioral constructs in project settings.

3.2 Study Population

The target population was 551 stakeholders: 84 head teachers, 12 sector education inspectors, 416 trained teachers, 22 project staff, two district education officials and 15 project partners. These six groups represented school, technical, administrative and partnership roles relevant to engagement and project performance.

3.3 Sampling Design

In order to determine an acceptable sample size when researchers have little knowledge on the behavior of a population, the study used Slovin's formula, for a known population and a 0.05 margin of error. The formula is commonly applied in social science studies where the population is known but variability is unclear. The study used scientifically accepted methods to ensure accuracy, fairness, and representation across all stakeholder categories involved in the Teacher Training Project.

The computed sample was 232. Proportional allocation across the six groups yielded 36 head teachers, five sector education inspectors, 175 trained teachers, nine project staff, one district education official and six project partners. The achieved quantitative sample comprised 214 complete questionnaires; the planned sample and completed responses are distinguished throughout.

The study used stratified sampling across the stakeholder categories, followed by simple random selection for questionnaire respondents within each category.

3.4 Data Collection Instrument

Documentation involves systematically examining recorded materials to extract relevant information that supports research objectives (Baranenko et al., 2023). The study employed documentation review as a research instrument to obtain secondary information related to the Teacher Training Project in Kamonyi District. This technique involved examining project reports, monitoring records, training manuals, attendance sheets, policy documents, and district education performance reports. The documentation evaluation aimed to strengthen the credibility of the results by validating primary data via comparisons with existing institutional records. It also helped the researcher spot trends, patterns, or gaps in the data about stakeholder involvement and project success.

3.5 Pilot Study, Validity and Reliability

The study conducted a pilot test to evaluate the effectiveness and suitability of the data collection instruments before they are used in the main study. The pilot involved 23 respondents, representing approximately 10% of the computed sample size, selected from schools and stakeholders in Gisagara District. Examining the clarity, relevance, logic, and ability to provide the necessary data of the questionnaire was the goal of the piloting phase. The pilot also helped identify confusing wording, inconsistent scaling, or technical issues that may hinder proper data collection. Based on feedback obtained from pilot participants, the researcher refined the tools to improve their validity, reliability, flow, and overall usability before launching full-scale data collection.

Content validity concerns whether the items adequately cover the intended constructs. Experts in educational research, project management and assessment reviewed the questionnaire for relevance and alignment with the objectives. The content validity index was calculated as the number of items judged relevant divided by the total number reviewed ($CVI = n/N$), not the reverse.

To find out how stable and consistent the quantitative research tool was, its reliability was tested. Results from the pilot study were input into SPSS 29 for the purpose of calculating Cronbach's Alpha, a measure of internal consistency reliability. The questions in the questionnaire consistently assess the target constructs, as shown by a Cronbach's Alpha value of 0.70 or above, which was deemed satisfactory. We made revisions or eliminated items before primary data collection if they substantially affected the dependability coefficient.

Table 1: Reliability Results

Variable	No. of Items	Cronbach's Alpha (α)
Interactive engagement	5	0.82
Functional engagement	5	0.87
Opportunistic engagement	5	0.81
Performance of educational project	5	0.89

All of the research variables had Cronbach's Alpha coefficients far higher than the acceptable cutoff of 0.70, according to the reliability analysis (Table 1). A high level of internal consistency was confirmed throughout the instrument, with values ranging from 0.81 for Opportunistic engagement to 0.89 for Performance of educational project. The findings show that the questionnaire accurately measures the specified constructs, which bodes well for the reliability of the data and the validity of subsequent statistical analyses.

3.6 Data Analysis

Questionnaire responses were screened, coded and analysed using IBM SPSS Statistics Version 29. Frequencies and percentages described respondents and item responses; means and standard deviations summarised each construct. Only the 214 complete questionnaires entered the quantitative analysis.

Pearson correlation estimated the direction and strength of bivariate relationships. Multiple linear regression estimated each engagement dimension's association with performance while accounting for the other dimensions. Hypotheses were assessed at the 0.05 significance level. SPSS outputs reported as .000 are interpreted as $p < 0.001$, not a probability of zero. Association was distinguished from causation.

Afterwards, the predictive potential of each engagement characteristic on project performance was assessed using multiple regression analysis. According to the regression model: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$

Where:

Y = Performance of the educational project

X_1 = Interactive engagement

X_2 = Functional engagement

X_3 = Opportunistic engagement

β_0 = Constant term

$\beta_1 - \beta_3$ = Regression coefficients

ϵ = Error term

This model allowed the researcher to determine how much variance in project performance explained by the different forms of stakeholders' engagement. The output was interpreted using model summary, ANOVA and coefficient tables produced by SPSS.

3.7 Ethical Considerations

Voluntary participation, informed permission, privacy, anonymity, safety, access to research sites, courtesy toward intellectual property, correct data storage, and conduct befitting a professional in the area were all considered ethical concerns.

Prior to participation, all individuals were given comprehensive information about the study's goals, methods, and their rights. They were made aware that their involvement is completely optional and that they are free to stop at any moment without any consequences. Their willing involvement was confirmed by obtaining written permission.

The data gathered was kept private and used only for academic reasons. No published results included names or personal identifiers. To prevent unauthorized parties from accessing or misusing participant information, data were safeguarded in accordance with Rwanda's Data Protection and Privacy Law No.058/2021. Hard copies were securely stored in a locked cabinet, while electronic data were encrypted and password-protected.

4. Results and Discussions

4.1 Response Rate

The response rate, which shows how many people out of the total sample were able to fill out the survey, is an important measure of how trustworthy and typical the results are. The results will be strong and accurately reflect the perspectives of all stakeholders in the Teacher Training Project in Kamonyi District if there is high participation.

Table 2: Response Rate

Questionnaire	Frequency	Percent
Filled and returned	214	92.24
Incomplete	18	7.76
Total	232	100.0

Source: Researcher (2026)

Table 2 records 214 complete questionnaires from the planned 232, giving a usable response rate of 92.24%. The remaining 18 (7.76%) were incomplete and excluded. This supports analysis of the achieved sample, but a high response rate alone does not demonstrate representativeness or eliminate non-response bias.

4.2 Inferential Statistics

4.2.1 Correlation Analysis

In order to determine the nature and degree of the connection between the factors pertaining to stakeholder participation and the success of the Teacher Training Project in Kamonyi District, a correlation analysis was conducted. Whether the link was positive or negative was shown by the Pearson correlation coefficient. At the 0.05 level of significance, the link was determined by looking at the Sig. value.

Table 3: Correlations

		Interactive engagement	Functional engagement	Opportunistic engagement	Performance of educational project
Interactive engagement	Pearson Correlation	1	.742**	.124	.649**
	Sig. (2-tailed)		.000	.070	.000
	N	214	214	214	214
Functional engagement	Pearson Correlation	.742**	1	.243**	.681**
	Sig. (2-tailed)	.000		.000	.000
	N	214	214	214	214
Opportunistic engagement	Pearson Correlation	.124	.243**	1	.229**
	Sig. (2-tailed)	.070	.000		.001
	N	214	214	214	214
Performance of educational project	Pearson Correlation	.649**	.681**	.229**	1
	Sig. (2-tailed)	.000	.000	.001	
	N	214	214	214	214

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Researcher (2026)

Table 3 shows a strong positive correlation between interactive engagement and perceived project performance ($r = 0.649$, $p < 0.001$; $n = 214$). Higher dialogue and feedback ratings accompanied higher performance ratings. The project-manager interview account describes meetings and peer learning as channels for this interaction. The qualitative account helps explain the pattern but does not prove a causal effect.

Functional engagement also had a strong positive correlation with performance ($r = 0.681$, $p < 0.001$), the largest of the three bivariate relationships. Interview descriptions of assigned responsibilities and coordinated follow-up provide contextual support. The result concerns perceived project performance rather than respondents' grades or independently measured learning gains.

Opportunistic engagement had a weak positive correlation with performance ($r = 0.229$, $p = 0.001$). Interview accounts nevertheless described difficulties with irregular participation. The positive bivariate relationship does not imply that self-interested behaviour improves implementation; overlapping with other engagement dimensions and contextual factors must be considered through the regression model.

The correlation results show that interactive engagement, functional engagement, and opportunistic engagement were positively related to performance of Teacher Training Project in Kamonyi District. Functional engagement had the strongest relationship with project performance, followed by interactive engagement. Opportunistic engagement had the weakest relationship with project performance. This implies that role performance, coordination, communication, and

participation were more strongly connected to project performance than opportunistic stakeholder behavior.

4.2.2 Regression Analysis

To find out how different factors including stakeholder participation affected the success of the Kamonyi District Teacher Training Project, regression analysis

was used. R, R Square, and Durbin-Watson were some of the metrics used to demonstrate the model's overall strength in the summary. The overall statistical significance of the regression model was tested using the ANOVA table. Teacher Training Project performance was examined using the coefficient table to reveal the individual effects of functional engagement, opportunistic engagement, and interactive engagement.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.719 ^a	.517	.511	.48953	2.013

a. Predictors: (Constant), Opportunistic engagement, Interactive engagement, Functional engagement

b. Dependent Variable: Performance of educational project

Source: Researcher (2026)

Table 4 reports $R = 0.719$, $R^2 = 0.517$ and adjusted $R^2 = 0.511$. The three engagement dimensions jointly accounted for 51.7% of variation in the observed performance scores; the remaining variation was

unexplained by this model. Durbin-Watson = 2.013 does not suggest substantial first-order residual autocorrelation, but it does not verify all regression assumptions. These results describe fit within this sample and do not establish causation.

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53.964	3	17.988	75.061	.000 ^b
	Residual	50.325	210	.240		
	Total	104.289	213			

a. Dependent Variable: Performance of educational project

b. Predictors: (Constant), Opportunistic engagement, Interactive engagement, Functional engagement

Source: Researcher (2026)

Table 5 shows that the model was statistically significant, $F(3, 210) = 75.061$, $p < 0.001$. At least one engagement coefficient differed from zero in the

combined model. The overall F-test does not establish that every engagement dimension was significant; the individual coefficients in Table 6 address that question.

Table 6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance VIF
1	(Constant)	1.125	.225		4.997	.000	
	Interactive engagement	.319	.069	.331	4.612	.000	.446 2.240
	Functional engagement	.391	.069	.415	5.654	.000	.427 2.344
	Opportunistic engagement	.056	.032	.087	1.749	.082	.934 1.071

a. Dependent Variable: Performance of educational project

Source: Researcher (2026)

Table 6 reports a significant positive adjusted association for interactive engagement ($B = 0.319$, $\beta = 0.331$, $t = 4.612$, $p < 0.001$). Holding the other two dimensions constant, a one-unit higher interactive score was associated with a 0.319-unit higher predicted performance score. The interview account of dialogue and shared review is consistent with this pattern. The first null hypothesis was rejected; a causal improvement is not established.

Functional engagement had a significant positive adjusted association ($B = 0.391$, $\beta = 0.415$, $t = 5.654$, $p < 0.001$). A one-unit higher functional score was associated with a 0.391-unit higher predicted

performance score, holding the other dimensions constant. Its standardised coefficient was the largest in the model. Interview accounts of clear duties and follow-up support this interpretation. The second null hypothesis was rejected.

Opportunistic engagement was not a significant independent predictor ($B = 0.056$, $\beta = 0.087$, $t = 1.749$, $p = 0.082$). Its positive point estimate does not establish a performance benefit. After accounting for the other two dimensions, the evidence was insufficient to reject the third null hypothesis at the 0.05 level.

Functional engagement had the largest standardised coefficient, followed by interactive engagement. Both

were statistically significant; opportunistic engagement was not. Reported tolerance values ranged from 0.427 to 0.934 and VIF from 1.071 to 2.344, suggesting no severe multicollinearity by common diagnostic thresholds.

These diagnostics do not establish causality or validate all model assumptions.

4.3 Decision on Null Hypotheses

Table 7: Summary of Hypotheses Decision

Null Hypothesis	Sig. value	Decision
H ₀₁ : Interactive engagement has no significant effect on performance of Teacher Training Project in Kamonyi District, Rwanda.	0.000	Rejected
H ₀₂ : Functional engagement has no significant effect on performance of Teacher Training Project in Kamonyi District, Rwanda.	0.000	Rejected
H ₀₃ : Opportunistic engagement has no significant effect on performance of Teacher Training Project in Kamonyi District, Rwanda.	0.082	Accepted

Source: Researcher (2026)

The first and second null hypotheses were rejected because the interactive and functional coefficients were significant (both $p < 0.001$). The third was not rejected ($p = 0.082$). This indicates insufficient evidence for an independent opportunistic-engagement association, rather than acceptance of the null as a proven fact.

4.4 Discussion of Research Findings

4.4.1 Interactive Stakeholders' Engagement and Performance of Teacher Training Project

Interactive engagement was very high ($M = 4.37$) and remained significant in the adjusted model ($B = 0.319$, $p < 0.001$). This agrees with the positive association reported for interactive participation by Kabarungi and Irechukwu (2023), while acknowledging their different project setting. OECD (2025) also places collaboration within professional learning. Stakeholder Theory and Participatory Development Theory explain the possible value of dialogue; the present evidence supports an association rather than a verified causal mechanism.

4.4.2 Functional Stakeholders' Engagement and Performance of Teacher Training Project

Functional engagement was very high ($M = 4.24$) and had the largest standardised regression coefficient ($\beta = 0.415$, $p < 0.001$). Kabarungi and Irechukwu (2023) also found a significant relationship for functional participation in a Rwandan donor-funded project. Mugabo and Wanjiku (2023) relate stakeholder involvement to mentorship sustainability. These studies support attention to responsibilities, but their different outcomes limit direct comparison. Stakeholder Theory and Social Capital Theory provide plausible explanations through coordinated contributions.

4.4.3 Opportunistic Stakeholders' Engagement and Performance of Teacher Training Project

Opportunistic engagement averaged 3.42, classified as high under the stated mean-score bands, with greater dispersion ($SD = 1.33$). Its weak bivariate correlation ($r = 0.229$, $p = 0.001$) became non-significant in the adjusted model ($B = 0.056$, $p = 0.082$). This distinction prevents interpreting the correlation as an independent performance benefit.

The Theory of Planned Behaviour offers a possible account of selective participation, but attitudes, norms and perceived control were not measured separately.

Likewise, passive participation in Kabarungi and Irechukwu (2023) is a different construct and should not be equated with opportunistic engagement.

The third null hypothesis was not rejected. The model provides insufficient evidence of an independent relationship at the 0.05 level, rather than proof of no relationship in every setting. The proposed buffering role of dialogue and role coordination remains an interpretation requiring further research; it was not tested as a mediating or moderating mechanism.

5. Conclusions and Recommendations

5.1 Conclusion

Interactive engagement was positively associated with perceived project performance. The finding supports regular dialogue and feedback as practical ways to address training needs, while the observational design does not establish a causal effect.

Functional engagement showed the strongest independent association with perceived performance. Clear assignments and coordinated follow-up therefore merit priority in project management.

Opportunistic engagement was not a significant independent predictor in this model. The study does not establish that such behaviour affected overall performance.

Overall, the evidence supports strengthening interactive and functional engagement in the Teacher Training Project. These conclusions apply to the studied respondents and project setting.

5.2 Recommendations

The recommendations below assign specific actions to stakeholders responsible for communication, role coordination and follow-up, reflecting the significant interactive and functional findings.

1. The Kamonyi District Education Office should hold a monthly teacher-training feedback meeting with head teachers, trainers and sector inspectors, record agreed actions and review unresolved issues at the next meeting.
2. Project management should maintain a responsibility register naming the lead person, deadline and completion evidence for each training and follow-up activity, and review it monthly with district coordinators.
3. Head teachers should schedule time for trained teachers to share classroom applications and report practical difficulties at each school's regular professional development meeting.
4. To address the third objective, project facilitators and school leaders should monitor missed sessions, ask affected stakeholders about participation barriers and arrange access to shared materials or follow-up sessions. This responds to reported irregular involvement without assuming that opportunistic engagement independently caused lower performance.
5. The Rwanda Basic Education Board and district education authorities should include recurring feedback meetings and documented responsibility assignments in teacher-development implementation guidance.
6. District authorities should require project reports to record attendance, completed follow-up actions and unresolved implementation barriers by school, so that support can be directed to sites with repeated gaps.

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