



RESEARCH PAPER

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Level of *Cacao* farmers' communication engagement, experiences and challenges towards a framework in community communication

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Key words: Community communication, Cacao farmers, Community engagement, Sustainable agriculture, Mixed-methods research

<http://dx.doi.org/10.12692/ijb/22.3.72-91>

Article published on March 20, 2023

Abstract

Embracing community communication as an integral part of research and action programs, stakeholders can foster a participatory approach that facilitates dialogue, collective decision-making, conflict resolution, and social mobilization. This study on the level of cacao farmers' communication engagement in Lasam, Cagayan, Philippines within the context of the School Plus Home Cacao RDE Project, reveals a moderate level of community communication among farmers. While the current engagement level is a positive sign of active participation, there exists ample scope for improvement to foster more robust community communication efforts. The mixed-methods research design provided valuable insights into both quantitative and qualitative aspects of communication engagement. Quantitative analysis indicated that cacao farmers exhibited a moderate level of engagement in community communication, while qualitative findings shed light on the significance of community communication in various aspects of cacao farming. Farmers' experiences and challenges related to community communication emphasize the importance of addressing language barriers, time constraints, limited connectivity, and inadequate information dissemination. The study highlights the potential benefits of an improved communication framework tailored to the specific needs of cacao farmers in Lasam. The proposed communication framework focuses on establishing reliable and inclusive channels, cultivating local champions, promoting farmer-to-farmer knowledge exchange, and collaborating with relevant stakeholders. Moreover, the framework emphasizes the value of flexible approaches, tailored information dissemination, and capacity building for digital literacy where applicable. By implementing the proposed communication framework, stakeholders can actively foster community engagement among cacao farmers, leading to more effective knowledge sharing, better decision-making, and enhanced social cohesion. Strengthening community communication efforts can lead to improved farming practices, increased resilience to challenges, and overall sustainable development in the cacao farming community of Lasam. Collaborative efforts involving local government, municipal agriculture offices, and educational institutions, such as CSU Lasam, are encouraged to support this initiative.

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Introduction

Community communication plays a pivotal role in fostering social cohesion, knowledge sharing, and sustainable development at a global level. Effective communication practices have been recognized as key drivers of positive change, particularly in the context of agriculture and rural development, across various communities worldwide. Community communication empowers individuals by providing them with access to information, resources, and opportunities for collective decision-making. Moreover, it nurtures a sense of ownership and active participation, promoting a bottom-up approach to development that aligns with the principles of inclusivity and empowerment. Community communication serves as a powerful tool for promoting sustainable development, social cohesion, and knowledge exchange on a global scale. The experiences and success stories from various communities worldwide demonstrate the transformative potential of effective communication practices in empowering individuals and driving positive change. As global challenges persist, fostering community communication remains an essential pathway for achieving the United Nations' Sustainable Development Goals and creating resilient and prosperous communities worldwide.

According to experts, community communication is a dynamic and interactive process that involves the exchange of information, ideas, and experiences among members of a community (Allen & Ballard, 2018; Lang & Lang, 2019; Tufte, 2017). It is a vital tool for fostering social cohesion, promoting knowledge exchange, and facilitating collective decision-making. Community communication goes beyond simply transmitting information; it involves active engagement, open dialogue, and the empowerment of community members to participate in discussions and initiatives that affect their lives. Through effective community communication, individuals can share local knowledge, learn from each other's experiences, and collaboratively address challenges and opportunities in their community. Community communication has proven instrumental

in addressing challenges related to climate change, food security, and social inequalities on a global scale. By facilitating information dissemination, capacity building, and collaboration, community communication initiatives have been successful in mobilizing resources and expertise to tackle complex issues facing communities. A study by Servaes (2020) highlights how community communication can empower vulnerable groups, such as smallholder farmers and indigenous communities, to advocate for their rights and interests, ensuring that their voices are heard in policy-making and development processes. However, it is essential to recognize that effective community communication is not without its challenges, particularly in marginalized or remote communities. Issues such as limited connectivity, language barriers, and time constraints can hinder communication efforts and limit access to information and opportunities. To address these challenges, the global perspective on community communication emphasizes the need for participatory approaches that consider the unique context and needs of each community. Building local capacities, fostering partnerships between stakeholders, and leveraging digital technologies are vital strategies in strengthening communication channels and ensuring inclusivity.

Cacao as an Agricultural Commodity

Cacao (*Theobroma Cacao*) is indeed a significant agricultural commodity in the Philippines, and its production in Region 02 has been gaining prominence in recent years. Cagayan Valley's favorable climate and soil conditions make it conducive for cacao cultivation, leading to the active promotion of cacao farming as a viable economic activity in the region (Mendoza *et al.*, 2020). The cultivation of cacao is primarily aimed at producing its beans, which serve as the essential raw material for cocoa and chocolate products (Dela Cruz *et al.*, 2019). The cacao industry in the Philippines has been experiencing steady growth, driven by the increasing demand for high-quality cocoa products both domestically and internationally (Dela Cruz *et al.*, 2018). Various stakeholders, including the government, agricultural agencies, and private sector organizations, have been providing support to cacao

farmers through different programs, research, and capacity-building initiatives (Agarwal *et al.*, 2017). These efforts are aimed at enhancing cacao farming practices, increasing productivity, and promoting sustainable agriculture (Dela Cruz *et al.*, 2019). In Region 02, particularly in the provinces of Cagayan, Isabela, Nueva Vizcaya, and Quirino, cacao farming has emerged as a vital livelihood option, contributing to the improvement of rural livelihoods and income diversification (Hainan *et al.*, 2019). The cacao production in Region 02 has been making a significant contribution to the national cacao output, supporting the country's aspirations of becoming a prominent player in the global cacao market. Moreover, the increasing awareness of the health benefits of cacao consumption and the growing demand for ethically sourced and sustainably produced cocoa products have opened market opportunities for cacao farmers in the region. Many farmers are now focusing on producing high-quality, fine-flavor cacao beans, which command premium prices in specialty markets (Agarwal *et al.*, 2017).

School Plus Home Cacao Project as Initiative to Support Cacao Industry in the Region

The School Plus Home Cacao Project, implemented by the College of Teacher Education at Cagayan State University in Lasam, Philippines, is seen as a significant initiative aimed at supporting and promoting the cacao industry in the region. The project focuses on cacao processing, highlighting the value-added aspect of the cacao value chain. By integrating cacao-related activities into the school curriculum, the project seeks to create awareness among students and teachers about the economic potential of cacao farming and processing. The School Plus Home Cacao Project emphasizes hands-on learning, allowing students to gain practical knowledge and skills in cacao processing. Through this initiative, the university aims to produce a new generation of cacao farmers, processors, and entrepreneurs who can contribute to the growth and sustainability of the cacao industry in Cagayan Valley. By empowering students, parents, and educators with knowledge and expertise in cacao, the project also aligns with broader national efforts to enhance the

country's position in the global cacao market and promote the use of locally sourced cocoa products. The School Plus Home Cacao Project serves as a model for how educational institutions can play a vital role in advancing agricultural industries and rural development by integrating specialized programs that address the region's unique agricultural opportunities, such as cacao farming and processing. Through the collaborative efforts of the university, local government, and other stakeholders, the project contributes to the growth of the cacao sector, fostering economic development, and improving the livelihoods of cacao farmers and processors in Cagayan Valley.

While there is existing research on the role of community communication in agricultural development and rural communities, there is a specific research gap concerning the communication engagement of cacao farmers in Lasam, Cagayan, within the context of the School Plus Home Cacao RDE Project. The majority of studies on community communication in agriculture have focused on broader agricultural practices or specific crops (Allen & Ballard, 2018, Lang & Lang, 2019, Servaes, 2020), with limited attention given to the unique challenges and opportunities faced by cacao farmers in this region. Additionally, there is a scarcity of research that combines both quantitative and qualitative methods to comprehensively understand the communication dynamics and experiences of cacao farmers. By conducting a mixed-methods study that explores both quantitative communication levels and qualitative experiences, this research aims to fill this gap and provide valuable insights into the current state of communication engagement among cacao farmers in Lasam. The practical gap in the study also lies in the limited implementation of targeted communication initiatives to enhance community engagement among cacao farmers in Lasam, Cagayan, within the context of the School Plus Home Cacao RDE Project.

While the research emphasizes the importance of community communication for fostering sustainable agriculture and knowledge exchange, there is a lack of specific communication programs tailored to the

needs of cacao farmers in this region. Existing agricultural development projects may not fully address the communication challenges faced by cacao farmers, such as limited connectivity, language barriers, and time constraints.

As a result, there is a practical gap in the application of effective communication strategies to empower cacao farmers with valuable knowledge and experiences and promote collaborative decision-making. By identifying this gap and proposing a community communication framework, this study aims to bridge the divide between research and practical implementation, providing stakeholders with actionable insights to enhance communication efforts and drive positive change within the cacao farming community in Lasam.

Taking into consideration the nature of community communication, it is considered an important factor for enhancing the capacity of members of a local community, such as farmers, to gain understanding and awareness of local issues, form opinions, and make informed decisions, particularly for cacao farmers. In the context of the School Plus Home Cacao Research Development and Extension (RDE) Project in Lasam, Cagayan, effective community communication plays a pivotal role in empowering cacao farmers and driving positive change within the farming community.

The School Plus Home Cacao RDE Project aims to enhance the productivity and sustainability of cacao farming through collaborative efforts and targeted interventions. As cacao farmers in Lasam face various challenges and opportunities, fostering community engagement and communication becomes essential for their overall development and success. The lack of robust communication channels and limited involvement of the younger generation in cacao farming may hinder the sector's long-term sustainability. Thus, there is a pressing need to identify strategies and interventions that empower cacao farmers with effective communication tools, enabling them to share best practices, overcome challenges, and

collectively make informed decisions to improve their farming practices and overall productivity.

The School Plus Home Cacao RDE Project, as an initiative of the Cagayan State University at Lasam, seeks to address these communication gaps and contribute to the sustainable growth and development of the cacao industry in Lasam, Cagayan. The study aims to address the gap in communication engagement by identifying the challenges and barriers faced by cacao farmers in their community communication efforts and proposing strategies to improve communication practices. By understanding the current state of communication engagement and its impact on critical farming activities, the research seeks to empower cacao farmers and drive positive change within the farming community, ultimately contributing to the long-term growth and sustainability of the cacao industry in Lasam, Cagayan.

Objectives of the Study

The general aim of this study is to assess the communication engagement of cacao farmers in Lasam, Cagayan. Specifically, the study aims to (1) determine the current level of communication engagement among cacao farmers in relation to their participation in the School Plus Home Cacao RDE Project; (2) explore the experiences and challenges faced by cacao farmers in their community communication efforts, while identifying barriers and opportunities for effective practices; and (3) propose a Communication Framework to Engage Cacao Farmers in Community Communication.

Materials and methods

Research Design

The research design for this study is a mixed-methods approach, tailored to investigate the level of communication engagement among cacao farmers in Lasam, Cagayan, within the context of the School Plus Home Cacao RDE Project. This approach combines both quantitative and qualitative research methods to provide a comprehensive understanding of the farmers' communication practices and their impact on the cacao farming community. For the Quantitative Aspect, the study employs structured

surveys to gather quantitative data from cacao farmers. The survey questions are carefully designed to assess various aspects of communication engagement, such as the frequency of communication, the use of communication tools (e.g., cellphones), participation in community events related to cacao farming, and awareness of the RDE Project. The responses are then subjected to statistical analysis, including measures such as means and standard deviations, to quantitatively assess the level of engagement. For the Qualitative Aspect, the study conducts in-depth key informant interviews and focus group discussions with cacao farmers. These qualitative methods aim to explore the farmers' experiences, challenges, and perceptions regarding community communication efforts. Through open-ended questions and interactive discussions, researchers gain rich insights into the farmers' perspectives, allowing for a deeper exploration of communication dynamics. Qualitative data analysis techniques, such as thematic analysis, are applied to identify common themes and patterns in the participants' narratives. The mixed-methods design allows for triangulation of data, enhancing the credibility and validity of the findings. By combining quantitative and qualitative approaches, the research offers a comprehensive picture of the current state of communication engagement among cacao farmers. This approach enables researchers and stakeholders to gain valuable insights into the strengths and weaknesses of community communication practices within the cacao farming community. Ultimately, the study aims to identify potential strategies and areas for improvement, fostering more informed and adaptive farming practices, and contributing to the sustainable development of the cacao industry in Lasam, Cagayan.

Respondents and Sampling Procedure, Data Gathering and Ethical Consideration

For the quantitative aspect of the study, the respondents were cacao farmers from the Lasam municipality in Cagayan. A purposive sampling technique was employed to select participants who were actively engaged in cacao farming and had direct involvement with the School Plus Home Cacao RDE

Project. The researchers approached local agricultural authorities and organizations to identify potential participants who met the criteria for inclusion. The sample size (N= 32) was determined to achieve a representative and meaningful representation of the cacao farming community in Lasam. For the qualitative aspect of the study, key informant interviews and focus group discussions were conducted to gather in-depth insights into the experiences and challenges of cacao farmers in community communication efforts. The key informants (N=8) were selected based on their expertise and knowledge of the cacao farming community and its communication dynamics. Criteria for selecting key informants included having a significant role in the cacao farming sector, being actively involved in community communication initiatives, and possessing a good understanding of the challenges faced by farmers in accessing information and resources.

In both the quantitative and qualitative aspects, the researchers ensured that the respondents represented a diverse range of farmers in terms of age, gender, farming experience, and geographical location. This approach aimed to capture a comprehensive view of the community communication practices and experiences of cacao farmers, allowing for a more robust and holistic analysis. Ethical considerations, such as informed consent and confidentiality, were upheld throughout the sampling process, ensuring the protection of the participants' rights and privacy.

Throughout the data gathering process, ethical considerations were paramount. Informed consent was obtained from all participants, and they were assured of their confidentiality and anonymity. The researchers maintained strict adherence to research ethics, ensuring that no personal or sensitive information was disclosed without the participants' explicit permission. Additionally, the researchers strived to create a safe and respectful environment during interviews and discussions, fostering open and honest dialogue. Ethical guidelines were followed to safeguard the participants' rights and privacy throughout the study.

Data Analysis

After collecting both quantitative and qualitative data, the researchers employed a rigorous and systematic approach to analyze the information obtained from cacao farmers in Lasam, Cagayan. For the quantitative aspect, the responses from the structured surveys were entered into a statistical software program for analysis. Descriptive statistics, including mean scores and standard deviations, were calculated to assess the level of communication engagement among the farmers. These quantitative analyses provided a quantitative understanding of the farmers' communication practices and allowed for a comparison of responses across different survey questions. For the qualitative aspect, the key informant interviews and focus group discussions were transcribed verbatim, ensuring accurate representation of the participants' perspectives. Thematic analysis was conducted to identify common themes, patterns, and key insights present in the qualitative data. The researchers carefully reviewed the transcripts, coded the data, and categorized responses into meaningful themes related to the experiences and challenges of community communication efforts among cacao farmers. Triangulation of data was performed to cross-validate findings from both the quantitative and qualitative analyses, enhancing the overall validity and reliability of the study. By integrating quantitative and qualitative data analyses, the researchers obtained a comprehensive and nuanced understanding of the communication engagement among cacao farmers in Lasam. This comprehensive approach allowed them to draw meaningful conclusions, identify areas for improvement, and propose potential strategies to enhance communication channels and knowledge exchange within the cacao farming community. The data analysis process played a critical role in informing the overall findings of the study and guiding future interventions and initiatives to support the sustainable development of the cacao industry in the region.

Results and discussion

Level of Communication Engagement of Cacao Farmers

As shown in Table 1, it presents the level of communication engagement among cacao farmers in

Lasam, Cagayan. The mean scores and standard deviations indicate the extent of agreement or engagement for each survey question. The results from the table reveal the level of communication engagement among cacao farmers in Lasam, Cagayan. The mean scores and standard deviations provide insights into the extent of agreement or involvement for each survey question. The overall Grand Mean of 3.33 falls within the *Moderate* category, indicating that cacao farmers exhibit a moderate level of engagement in community communication. The findings suggest that while some aspects of communication, such as using cellphones to share information and participating in community events, show a higher level of agreement *Agree*, other aspects, such as regular communication with fellow farmers, seeking advice, and sharing experiences, demonstrate a moderate level of agreement *Moderate*. This suggests that there is scope for improvement in enhancing communication practices among cacao farmers in Lasam.

The moderate level of communication engagement among cacao farmers highlights the potential for further strengthening community communication in the context of the School Plus Home Cacao RDE Project. By encouraging more frequent and open communication, farmers can benefit from the exchange of knowledge and experiences, leading to improved farming practices and increased overall productivity. The results align with previous studies that emphasized the importance of effective community communication for agricultural development. Similar research has reported varying levels of communication engagement among farmers, with opportunities identified for enhancing communication channels. Implementing strategies to promote better communication can foster collaboration, collective decision-making, and knowledge sharing, contributing to a more sustainable and thriving cacao industry in the region.

The findings emphasize the significance of community communication in the context of the School Plus Home Cacao RDE Project. To enhance farming practices and promote sustainability, there

is a need for targeted interventions and programs that encourage more active and frequent communication among farmers. By fostering an environment of open dialogue and knowledge exchange, stakeholders can work together towards a

more prosperous cacao industry in the area. Enhancing communication channels among cacao farmers can lead to valuable knowledge exchange and experiences, which in turn can improve farming practices and overall productivity.

Table 1. Level of Communication Engagement of Cacao Farmers.

Survey Question	Mean (N=32)	StD	Interpretation
I regularly communicate with other cacao farmers in the community.	3.25	0.78	Moderate
I actively participate in community meetings and events related to cacao farming.	3.56	0.92	Agree
I use cellphones or mobile devices to stay connected and share information with other farmers.	3.78	1.02	Agree
I am comfortable expressing my ideas and opinions during community discussions.	3.21	0.85	Moderate
I actively seek advice and knowledge from fellow cacao farmers to improve my farming practices.	3.45	0.97	Moderate
I am aware of the School Plus Home Cacao RDE Project and its objectives.	3.65	0.89	Agree
I feel that my ideas and suggestions are valued in the community communication process.	3.32	0.74	Moderate
I actively share my experiences and challenges with other cacao farmers in the community.	3.12	0.79	Moderate
I am open to adopting new farming practices or techniques shared by fellow farmers.	3.67	0.92	Agree
I believe that effective community communication can improve the overall cacao farming practices in our area.	3.41	0.86	Agree
Grand Mean	3.33	0.26	Moderate

Legend: 1.00 – 1.80: Never/Strongly Disagree | 1.81 – 2.60: Rarely/Disagree | 2.61 – 3.4: Sometimes/Moderately agree | 3.41 – 4.20: Often/Agree | 4.21 – 5.00: Always/Strongly Agree

The study's outcomes align with previous research emphasizing the importance of effective community communication for agricultural development. Similar studies have reported varying levels of communication engagement among farmers, indicating room for improvement in communication practices. Promoting better communication strategies can foster collaboration, collective decision-making, and knowledge sharing, contributing to a more sustainable and thriving cacao industry in the region. The findings underscore the significance of community communication within the context of the School Plus Home Cacao RDE Project. To enhance farming practices and promote sustainability, targeted interventions and programs that encourage active and frequent communication among farmers are crucial. By fostering an environment of open dialogue and knowledge exchange, stakeholders can work together towards a more prosperous cacao industry in the area. These results provide valuable insights for stakeholders to develop effective communication initiatives that empower cacao

farmers and promote the long-term growth of the cacao industry in Lasam, Cagayan.

The moderate level of communication engagement among cacao farmers in Lasam, Cagayan, as revealed by the study, aligns with previous research emphasizing the significance of effective community communication for agricultural development. Studies have consistently shown that active and frequent communication among farmers leads to knowledge sharing, adoption of best practices, and improved farming outcomes (Kumar *et al.*, 2018; Mungai *et al.*, 2020). In the context of the School Plus Home Cacao RDE Project, enhancing communication channels and fostering an environment of open dialogue can empower cacao farmers with valuable knowledge and experiences, ultimately contributing to the long-term growth and sustainability of the cacao industry in the region. The findings highlight the importance of targeted interventions and programs to promote better communication practices among cacao farmers. By providing platforms for information

exchange and encouraging farmer-to-farmer knowledge sharing, stakeholders can foster collaboration and collective decision-making, which are crucial for addressing challenges and opportunities in cacao farming (Ampaire *et al.*, 2021). Additionally, the study underscores the value of inclusivity in communication efforts, ensuring that all farmers, regardless of their connectivity status, have access to relevant information and resources (Lilavois *et al.*, 2019). This study emphasizes the significance of local champions and community leaders in facilitating effective communication within the farming community. Empowering these individuals with communication and facilitation skills can bridge language barriers and promote active participation among farmers (Houkonnou *et al.*, 2019). Collaborating with relevant stakeholders, such as agricultural extension services and local authorities, can further strengthen communication efforts and ensure the successful dissemination of information (Nweze *et al.*, 2021).

Thematic Analysis of the Cacao Farmers' Experiences on Community Communication Efforts on Knowledge Exchange, Social Cohesion, and Community-Decision Making

By utilizing qualitative data analysis methods, the study identified the common themes and patterns in the experiences and challenges faced by cacao farmers in community communication, providing a comprehensive overview of the prevalent issues. Basing from the in-depth interviews with 8 cacao growers in the Municipality of Lasam, the following are the experiences in community communication efforts:

Theme 1. Knowledge exchange

Cacao farmers in Lasam actively engage in knowledge exchange with fellow farmers, sharing valuable information about farming practices, crop management techniques, and pest control strategies. This open communication fosters a culture of collective learning and support within the community. The cacao farming community values the exchange of knowledge, as it enables them to learn about innovative farming practices and effective pest control methods. Through sharing experiences and

solutions, farmers have significantly improved their crop yield and overall farming methods, leading to increased productivity and success in the industry. Cacao farmers highlighted positive experiences in exchanging knowledge with fellow farmers, enabling them to learn about new farming practices, crop management techniques, and pest control strategies. They expressed that regular communication with other farmers allowed them to learn about new and innovative farming practices, crop management techniques, and effective pest control strategies. This knowledge exchange was seen as crucial for improving their own farming methods and increasing overall productivity.

As Key Informant 1 (KI 1) noted, *"Being able to exchange knowledge with other cacao farmers has been immensely beneficial for us. We get to learn about different farming practices that we might not have known otherwise. For example, one farmer shared a new technique for pruning cacao trees, and it has significantly improved our crop yield. Another farmer shared an organic pest control method that has been effective in managing pests without using harmful chemicals. These exchanges have really helped us improve our farming methods and increase our overall productivity."* From KI1 perspective, Knowledge exchange with other cacao farmers has been immensely beneficial. Learning about different farming practices, such as new techniques for pruning cacao trees and effective organic pest control methods, has significantly improved our crop yield and farming methods, leading to increased overall productivity.

In like manner, KI 2 also emphasized the importance of knowledge exchange, stating, *"In our community, we have a culture of sharing information and experiences. Whenever we face challenges or have new ideas, we discuss them during our gatherings. This open communication has led to a wealth of shared knowledge. I remember a time when I was struggling with a specific disease affecting my cacao plants. By talking to other farmers, I found out about a natural remedy that worked wonders. Now, whenever I encounter other farmers facing the same*

issue, I share that solution with them. It's a reciprocal process that benefits everyone." This would mean that the one farmer's experience with a cacao plant disease highlights the power of community communication. By engaging with fellow farmers, they discovered a natural remedy that proved highly effective. This knowledge-sharing approach has created a reciprocal process where farmers help each other, contributing to the overall success and productivity of the community. These statements illustrate the positive impact of knowledge exchange in the cacao farming community. The willingness to share experiences and techniques has created a supportive environment where farmers can learn from each other and collectively improve their farming practices. This ongoing exchange of information contributes to the continuous growth and development of the cacao industry in Lasam, benefiting both individual farmers and the community as a whole.

The thematic analysis on knowledge exchange among cacao farmers in Lasam is supported by previous research on the importance of knowledge sharing in agricultural communities. Various studies have emphasized that knowledge exchange plays a crucial role in enhancing farming practices, increasing productivity, and promoting sustainable agricultural development. For instance, a study by Deressa *et al.* (2020) on traditional irrigation management in drought-prone areas of Kenya found that knowledge exchange among farmers facilitated the adoption of improved farm land management practices. Similarly, Adjei-Nsiah *et al.* (2019) highlighted that farmers who engaged in knowledge exchange networks in Ghana had better pest management practices and higher crop yields. Social capital, which fosters social cohesion and trust among community members, has been identified as a key facilitator of knowledge exchange in farming communities (Moustier *et al.*, 2018; Mekonnen *et al.*, 2019). The willingness of cacao farmers in Lasam to openly share their experiences and solutions (as demonstrated by Key Informant 2) is a testament to the strong social ties and mutual support within the community. The positive experiences of cacao farmers in Lasam

regarding knowledge exchange hold significant practical implications for the enhancement of community communication efforts and the overall development of the cacao farming industry. To capitalize on these positive experiences, agricultural stakeholders and policymakers can create dedicated platforms and opportunities for farmers to share their valuable knowledge and experiences. Community gatherings, workshops, and farmer cooperatives can serve as effective spaces for farmers to engage in meaningful knowledge exchange. In addition, ensuring access to reliable agricultural information and resources is crucial in facilitating knowledge exchange among cacao farmers. Leveraging extension services and digital platforms for information dissemination can broaden the reach of valuable farming practices and innovations, enabling more farmers to benefit from the collective wisdom of their peers.

Strengthening social networks within the cacao farming community is equally essential in promoting a culture of open communication and knowledge sharing. By fostering social cohesion and trust among farmers, existing social networks can be strengthened, and collaboration can be encouraged, leading to more effective and widespread knowledge exchange. Furthermore, supporting farmer-led initiatives and farmer-to-farmer extension approaches empowers individual farmers to take an active role in disseminating knowledge and innovative practices among their fellow farmers. This bottom-up approach to knowledge sharing can create a strong sense of ownership and responsibility within the farming community. The positive impact of knowledge exchange on improving farming methods and increasing productivity aligns with the broader objective of promoting sustainable agriculture. By adopting innovative and eco-friendly practices shared through community communication, cacao farmers can contribute to the sustainable growth of the cacao industry and environmental conservation. By taking into account the positive experiences and practical implications, stakeholders can design targeted interventions that further promote knowledge exchange and collective learning among cacao farmers. Ultimately, these efforts will contribute to

the sustainable development and prosperity of the cacao farming community in Lasam, benefiting both individual farmers and the community as a whole.

Theme 2. Social Cohesion

As to Social Cohesion, the Farmers expressed satisfaction in being part of a close-knit farming community where regular communication fosters a sense of belonging and mutual support. They emphasized that community communication not only improved their farming practices but also created a supportive network where they could rely on each other during challenging times. The experiences of cacao farmers in Lasam regarding social cohesion highlight the crucial role of community communication in fostering a strong and close-knit farming community. Farmers expressed immense satisfaction in being part of such a community, where regular communication fosters a profound sense of belonging and mutual support. This sense of camaraderie extends beyond the exchange of farming knowledge and practices, as farmers emphasized that community communication plays a pivotal role in creating a supportive network.

As Key Informant 3 (KI3) noted, *"Being part of our cacao farming community has been a truly enriching experience. We have established strong bonds with our fellow farmers through regular communication and gatherings. It's not just about farming; we genuinely care for each other's well-being and support one another during difficult times. This sense of belonging motivates us to work together towards our common goals and uplift the entire community."* KI4 also shared similar sentiments, stating, *"Community communication has united us as a farming family. When one of us faces a challenge, we know we can rely on others for help and advice. It's like having an extended family that looks out for each other. This unity has made us more resilient and determined to overcome any obstacles that come our way."* The experiences shared by KI3 and KI4 reflect the profound impact of community communication on social cohesion within the cacao farming community. Regular communication has created a sense of togetherness, establishing a

support system where farmers can lean on each other for encouragement, advice, and assistance. This strong network of mutual support not only enhances their farming practices but also contributes to their overall well-being and emotional resilience.

The importance of social cohesion in community communication efforts cannot be overstated. It cultivates a shared sense of identity and purpose among cacao farmers, fostering a spirit of collaboration and collective progress. As they work together towards common goals, the farming community becomes more cohesive and empowered to face challenges with unity and determination. The sense of belonging and mutual support nurtured through regular communication creates a close-knit and resilient farming community. Encouraging and promoting community communication initiatives can further strengthen this social cohesion and contribute to the sustainable development and prosperity of the cacao farming industry in Lasam. The positive experiences shared by farmers demonstrate that community communication goes beyond its immediate impact on improving farming practices. It serves as a foundation for building social bonds and establishing trust among members of the cacao farming community. By engaging in regular communication, farmers strengthen their connections with one another and develop a shared sense of identity and purpose. The sense of belonging within this close-knit community instills a feeling of security and reassurance, knowing that they can rely on each other during challenging times.

This social cohesion nurtured through community communication is invaluable, especially in the context of agriculture, where farmers often face uncertainties and external challenges. The mutual support and collaboration among community members contribute to a more resilient and thriving cacao farming community. By fostering a culture of open communication and collective support, farmers gain not only practical knowledge but also emotional and psychological reinforcement, which significantly enhances their overall well-being and adaptability. The findings underscore the significance of social

cohesion as a result of community communication efforts. It emphasizes the role of communication beyond its instrumental value in farming practices and highlights its potential in building a sense of community and solidarity among cacao farmers. This social cohesion not only fortifies the farming community's resilience but also contributes to a sense of shared purpose and collective progress, ultimately benefiting the entire cacao industry in Lasam. The positive experiences of cacao farmers in being part of a close-knit and supportive community reaffirm the importance of fostering community communication as an integral component of agricultural development in Lasam, Cagayan.

Literature supports the idea that social cohesion is a critical factor in agricultural communities' success. Research on rural communities has highlighted the importance of social networks and communication in enhancing agricultural productivity, resilience, and community development (Pretty & Smith, 2004; Flora & Flora, 2013). Studies have shown that cohesive farming communities are better positioned to adapt to challenges such as climate change and market dynamics (Berkes & Ross, 2013). Moreover, strong social bonds foster a sense of shared identity and purpose, which enhances collective action for community-driven development (Adger, 2003). The implications of social cohesion in community communication efforts extend beyond the cacao farming industry in Lasam. Promoting community communication and fostering social cohesion can benefit various agricultural communities worldwide. Agricultural policymakers, extension services, and development organizations should consider incorporating community communication initiatives that encourage knowledge exchange, collaboration, and mutual support. By prioritizing social cohesion, stakeholders can empower farmers, improve agricultural practices, and create sustainable and thriving farming communities.

Theme 3. Community Decision-Making

As to Community Decision-Making, cacao farmers in Lasam expressed appreciation for their active involvement in community meetings and discussions,

where important decisions about farming practices, resource allocation, and project planning are collectively made. Community communication plays a pivotal role in facilitating these decision-making processes, allowing farmers to have a voice and participate in shaping the future of their farming community. The experiences of cacao farmers underscore the significance of inclusive and participatory decision-making, which goes beyond individual farming practices and encompasses broader community development. Cacao farmers find value in being part of a decision-making process that involves their insights and contributions. This sense of ownership in decision-making fosters a greater commitment to implementing agreed-upon strategies and fosters a sense of accountability among community members. By actively engaging in community meetings and discussions, farmers can collectively identify challenges and explore opportunities for improvement in their farming practices.

As Key Informant 5 (KI5) stated, *"Being part of the decision-making process has been empowering for us as cacao farmers. We feel that our opinions are valued, and we can collectively work towards common goals. When we discuss which projects to undertake or how to allocate resources, we consider the needs and perspectives of everyone. This collaborative approach has led to better decision outcomes and strengthened our unity as a community."* KI6 also highlighted the importance of community communication in decision-making, saying, *"Our community meetings provide a space for open dialogue and creative thinking. Through these discussions, we have initiated projects that benefit all of us. For instance, we jointly invested in a community irrigation system, which has significantly improved our water management and crop yields. The sense of collective ownership has made us more committed to the success of such projects."* The experiences shared by KI5 and KI6 exemplify the positive impact of community decision-making in the cacao farming community. The engagement in collective decision-making processes enhances farmers' understanding of various perspectives and allows them to leverage the

collective wisdom of the community. Moreover, community decision-making creates a supportive network where farmers can rely on each other during challenging times, fostering a spirit of cooperation and mutual assistance.

The implications of community decision-making in community communication efforts are substantial. By involving farmers in the decision-making process, stakeholders can ensure that initiatives and projects are tailored to the specific needs and aspirations of the community. This participatory approach fosters a greater sense of ownership and commitment, leading to more effective implementation of projects and a stronger sense of unity among farmers. Additionally, community decision-making enhances the community's adaptive capacity, as it allows farmers to collectively respond to changing circumstances and challenges. The theme of community decision-making among cacao farmers in Lasam highlights the importance of inclusive and participatory processes in agricultural communities. The positive experiences shared by the farmers underscore the significance of community communication in fostering a sense of ownership, accountability, and unity within the farming community. By actively engaging in community meetings and discussions, cacao farmers can collectively identify challenges, explore opportunities, and jointly make decisions that benefit the entire community.

The literature supports the idea that community decision-making is a crucial factor in enhancing agricultural productivity, resilience, and community development. Pretty and Smith (2004) emphasize that involving farmers in decision-making processes can lead to more effective resource management and increased community cohesion. This participatory approach fosters a sense of ownership and commitment, leading to greater cooperation among community members in achieving common goals (Flora & Flora, 2013). In the context of agriculture, community decision-making has been shown to improve adaptive capacity, enabling farmers to collectively respond to challenges such as climate change and market dynamics (Berkes & Ross, 2013).

Furthermore, community decision-making has broader implications for sustainable development. By involving farmers in the planning and implementation of projects, stakeholders can ensure that initiatives are better aligned with the specific needs and aspirations of the community (Adger, 2003). This participatory approach enhances the effectiveness of development interventions and fosters a stronger sense of ownership among community members, leading to improved project outcomes and sustainability.

Thematic Analysis of the Cacao Farmers' Challenges on Community Communication Efforts on limited connectivity, language barriers, time constraint, generational gap, and Inadequate Information Dissemination

The thematic analysis of the cacao farmers' challenges on community communication efforts reveals several significant obstacles that impact the effectiveness of communication within the farming community in Lasam, Cagayan. These challenges encompass diverse aspects, including limited connectivity, language barriers, time constraints, generational gaps, and inadequate information dissemination. Addressing these challenges is crucial to fostering a more inclusive and participatory communication environment that empowers cacao farmers to exchange knowledge, support one another, and collectively enhance their farming practices. In this context, understanding and overcoming these hurdles can pave the way for more resilient and thriving cacao farming communities, ultimately contributing to the sustainable development and prosperity of the cacao industry in Lasam.

Theme 1. Limited Connectivity

Some farmers might face challenges due to limited access to communication tools like cellphones or internet connectivity, which hinder their ability to stay connected with other farmers or access valuable information. Limited connectivity poses a significant challenge for some cacao farmers in Lasam, as it restricts their access to essential communication tools such as cellphones or the internet. This lack of connectivity hinders their ability to stay connected

with other farmers and access valuable information necessary for improving their farming practices. Key Informant 7 (KI7) and Key Informant 8 (KI8) emphasized the difficulties faced by farmers due to limited access to communication tools. KI7 shared that *"Many of our fellow farmers in remote areas struggle with poor mobile network coverage. It's challenging for them to stay in touch with other farmers or access online resources about best practices in cacao farming."* KI8 further added, *"Internet access is still limited in our community. Farmers here rely heavily on traditional means of communication, like word of mouth and local gatherings, which can be less effective in exchanging knowledge compared to modern digital tools."* The experiences shared by KI7 and KI8 shed light on the implications of limited connectivity in the context of community communication efforts. Farmers with restricted access to cellphones or the internet face communication barriers that hinder their ability to engage in knowledge exchange and learn about new farming techniques. This limitation may lead to a lack of awareness of innovative practices, and farmers may miss out on opportunities for improving their crop yield and overall farming methods.

To address the challenge of limited connectivity, concerted efforts are needed to improve digital infrastructure and expand internet access in rural areas like Lasam. Telecommunication companies, local authorities, and agricultural stakeholders can collaborate to develop strategies for extending network coverage to remote farming communities. Additionally, promoting the use of offline communication channels, such as community-based workshops and radio programs, can complement digital approaches and ensure that valuable information reaches farmers regardless of their access to the internet. By addressing the issue of limited connectivity, stakeholders can empower cacao farmers with the tools they need to stay connected, exchange knowledge, and enhance their farming practices. Access to communication technology is vital in fostering community communication and supporting the sustainable development of the cacao farming industry in Lasam. Additionally, promoting

alternative means of communication, such as community-based communication networks or radio programs, can help disseminate valuable information and create channels for knowledge exchange even in areas with limited internet connectivity.

The lack of access to communication tools such as cellphones or the internet can significantly hinder farmers' ability to stay connected with each other and access valuable information. This theme sheds light on the implications of limited connectivity in the context of community communication efforts and its potential impact on the cacao farming industry. The literature supports the idea that limited connectivity can have adverse effects on agricultural communities' development and resilience. Research has shown that access to information and communication technology (ICT) is vital for improving farmers' knowledge and practices (Qian *et al.*, 2020). Digital tools, such as mobile apps and online resources, can provide farmers with up-to-date information on best practices, crop management techniques, and market trends, leading to improved productivity and income (Kodan & Goswami, 2019). However, as highlighted by KI7 and KI8, limited mobile network coverage and internet access in remote areas can hinder farmers' ability to utilize these valuable resources. Moreover, limited connectivity may exacerbate the digital divide, where farmers with access to digital tools benefit from information and knowledge exchange, while those without such access miss out on these opportunities (Ndiema *et al.*, 2021). This can create disparities within the farming community, potentially leading to unequal outcomes in terms of productivity and income. To address the challenge of limited connectivity, various strategies can be implemented. Improving digital infrastructure in rural areas and expanding internet access is crucial. Governments, telecommunication companies, and development organizations can collaborate to bridge the digital divide and ensure that all farmers have equal opportunities to access valuable information and resources. In addition to digital solutions, promoting alternative means of communication can be beneficial. Community-based workshops, farmer gatherings, and radio programs are effective channels

for knowledge exchange, even in areas with limited internet connectivity (Shivendra *et al.*, 2020). These traditional forms of communication foster a sense of community and solidarity among farmers and enable them to share experiences and innovations.

Theme 3. Language Barriers

In a diverse community, language differences might hinder effective communication among farmers, leading to misinterpretations and misunderstandings. Key Informants 1 (KI1), as confirmed by KI3 and KI4, highlighted the challenges posed by language barriers in the context of community communication efforts since most of the cacao farmers are Ilocano, Ibanag, and . KI1 shared that *"Our farming community is made up of farmers from different linguistic backgrounds. Sometimes, during our gatherings, language differences can be a challenge. Some farmers may not fully understand the discussions, and this can lead to misunderstandings."* KI3 added, *"As a community, we try our best to overcome language barriers. We have informal translators who help bridge the gap during meetings. But it's not always perfect, and some nuances may still be lost in translation."* KI4 further emphasized, *"Language barriers can sometimes create a sense of isolation for farmers who are not fluent in the dominant language used during our meetings. They may hesitate to actively participate, and their valuable perspectives could be left unheard."* The experiences shared by KI1, KI3, and KI4 demonstrate the implications of language barriers in community communication efforts. In a diverse farming community where multiple languages are spoken, effective communication can become challenging. Language differences can lead to misinterpretations, hamper the exchange of ideas, and hinder the collective decision-making process. Farmers who do not fully understand the discussions may miss out on important information, innovative practices, and valuable insights shared by others. This, in turn, may impact their farming practices and overall productivity.

The findings on language barriers in community communication efforts among cacao farmers in Lasam align with existing literature on the challenges

posed by linguistic diversity in diverse agricultural communities. Language differences can indeed hinder effective communication, leading to misinterpretations and misunderstandings, which can have significant implications for knowledge exchange and decision-making processes.

Research on agricultural communities has highlighted the importance of effective communication in promoting collaboration and collective action (Pretty & Smith, 2004). When farmers come from diverse linguistic backgrounds, as is the case in Lasam, language barriers can create communication gaps, limiting the exchange of knowledge and experiences. This limitation is particularly relevant in the context of farming practices, where specific terminologies and techniques may be understood differently across languages (Berkes & Ross, 2013). Studies have shown that language barriers can affect farmers' ability to access information and resources, hindering their capacity to adopt new and innovative farming practices (Sudhakar, 2019). Farmers who face difficulties understanding discussions may feel excluded from decision-making processes, leading to a sense of isolation and reduced engagement in community activities. As a result, valuable perspectives and insights from farmers who are not fluent in the dominant language may go unheard, leading to missed opportunities for collective learning and improvement (Flora & Flora, 2013).

To address language barriers in community communication efforts, several strategies can be considered. First, providing translation services or interpreters during community gatherings can help bridge the communication gap and ensure that all farmers can fully participate in discussions and share their perspectives (Adger, 2003). Additionally, promoting language diversity and cultural inclusivity within the community can foster an environment of respect and appreciation for different linguistic backgrounds (Kodan & Goswami, 2019). Creating a space where farmers feel comfortable expressing themselves in their native languages can contribute to more effective knowledge exchange and collaboration. Furthermore, promoting the use of visual aids,

demonstration techniques, and hands-on learning can complement verbal communication and transcend language barriers (Ndiema *et al.*, 2021). Visual and practical demonstrations can help convey farming techniques and practices more effectively, ensuring that all farmers, regardless of language proficiency, can grasp the concepts. The implications of addressing language barriers in community communication efforts are significant. By fostering effective communication and knowledge exchange, farmers can learn from each other's experiences, adopt innovative practices, and improve their overall farming methods. Enhanced communication can lead to better decision-making, as all farmers' perspectives and insights are taken into account. Additionally, promoting inclusivity and cultural diversity within the community can strengthen social cohesion and foster a sense of belonging among farmers, ultimately contributing to a more resilient and prosperous cacao farming community in Lasam.

Theme 4. Time Constraints

Farmers may struggle to balance their farming responsibilities with participating in community events or meetings, which can affect their level of engagement. Key Informants 5 (KI5), 6 (KI6), and 8 (KI8) affirmed the challenges posed by time constraints in the context of community communication efforts. These time constraints arise from the demanding nature of farming responsibilities, which may require farmers to allocate significant time and effort to tend to their crops and manage their farms. KI5 highlighted, *"As much as we want to actively participate in community meetings, our farming duties often take precedence. During peak farming seasons, it's difficult to find the time to attend gatherings."* KI6 shared similar sentiments, stating, *"We have a lot on our plate, and sometimes, we have to prioritize our farming tasks over community events. While we value community communication, it's not always easy to juggle both."* KI8 also emphasized, *"Time is a precious resource for us, and we must allocate it wisely. Sometimes, we can only attend important community meetings, while other gatherings may have to be skipped due to time constraints."*

The experiences shared by KI5, KI6, and KI8 illustrate the implications of time constraints on community communication efforts among cacao farmers. Balancing farming responsibilities with community engagement can be challenging, and this may result in reduced attendance and participation in community events. As a result, farmers who are constrained by time may miss out on valuable opportunities for knowledge exchange, decision-making, and collaboration within the community.

Time constraints can also impact the frequency and consistency of communication among farmers. Infrequent meetings or irregular participation can hinder the development of a strong and cohesive community, limiting the collective learning and support that community communication fosters. Moreover, time constraints may lead to missed opportunities for joint problem-solving and the exchange of innovative farming practices. To address the challenge of time constraints, flexible and adaptive approaches to community communication can be adopted. Scheduling community events during non-peak farming seasons or finding time slots that accommodate farmers' availability can enhance participation. Additionally, leveraging digital communication tools, such as online platforms or messaging apps, can provide farmers with a more convenient and accessible means of staying connected and engaged in community discussions, even amid busy farming schedules. Moreover, promoting the value and benefits of community communication to farmers is essential. Highlighting the positive outcomes and contributions that come from active participation in community events can encourage farmers to prioritize and make time for such engagements. Creating a sense of collective responsibility and ownership among farmers in shaping the community's future can foster a stronger commitment to community communication efforts. The implications of addressing time constraints in community communication efforts are significant. By finding ways to accommodate farmers' busy schedules and ensuring their active involvement, stakeholders can strengthen the sense of community and mutual support among cacao farmers. Increased engagement

and consistent communication can lead to more effective knowledge exchange, better decision-making, and collaborative problem-solving, ultimately contributing to the overall success and sustainability of the cacao farming industry in Lasam.

The theme of time constraints in community communication efforts among cacao farmers highlights a significant challenge faced by agricultural communities. This issue has been recognized in the literature as a common concern for farmers who must balance their farming responsibilities with their engagement in community activities. Studies have shown that time constraints can hinder farmers' participation in collective decision-making, knowledge exchange, and learning opportunities (Flaten *et al.*, 2010; Klerkx *et al.*, 2013). Farmers' busy schedules, especially during peak farming seasons, can limit their availability to attend community events and meetings, resulting in reduced participation and communication. This limitation may lead to missed opportunities for joint problem-solving and the exchange of innovative farming practices, ultimately hindering community development and progress. To address the challenge of time constraints, flexible and adaptive approaches to community communication are essential. Research has suggested that scheduling community events during non-peak farming seasons or finding time slots that accommodate farmers' availability can enhance participation and engagement (Flaten *et al.*, 2010). Moreover, leveraging digital communication tools, such as online platforms or messaging apps, can offer farmers a more convenient and accessible means of staying connected and engaged in community discussions (Klerkx *et al.*, 2013). Promoting the value and benefits of community communication to farmers is crucial in overcoming time constraints. Studies have shown that when farmers recognize the positive outcomes and contributions that come from active participation in community events, they are more likely to prioritize and make time for such engagements (Flaten *et al.*, 2010). Creating a sense of collective responsibility and ownership among farmers in shaping the community's future can also foster a stronger

commitment to community communication efforts (Klerkx *et al.*, 2013).

Theme 5. Inadequate Information Dissemination

Farmers may express concerns about not receiving timely information about relevant agricultural programs, government initiatives, or training opportunities, leading to missed opportunities for improvement. Key Informants 3 (KI3), 4 (KI4), 6 (KI6), and 8 (KI8) highlighted the challenges posed by inadequate information dissemination in the context of community communication efforts. These challenges arise from a lack of effective channels for information flow, limited access to reliable sources of information, and insufficient outreach efforts by relevant authorities. KI3 expressed concern, stating, *"There are times when we are not aware of new agricultural programs or initiatives that could benefit our farming practices. The information doesn't always reach us, and we end up missing out on valuable opportunities for improvement."* KI4 echoed this sentiment, adding, *"It's frustrating when we hear about training workshops or government support programs after they have already taken place. We wish there were better ways to keep us informed."* KI6 also shared their experience, saying, *"Inadequate information dissemination affects our ability to stay updated on new farming technologies and sustainable practices. This hampers our efforts to adopt innovative methods that could enhance our crop yield and environmental sustainability."* KI8 further emphasized the importance of timely information, stating, *"Receiving relevant information on time is crucial for decision-making and planning. When we lack access to such information, we feel disconnected and uninformed."* The experiences shared by KI3, KI4, KI6, and KI8 demonstrate the implications of inadequate information dissemination in community communication efforts among cacao farmers. When farmers do not receive timely and relevant information, they miss out on opportunities to enhance their farming practices, access resources, and participate in beneficial programs. This lack of information can hinder the community's overall development and progress.

To address the challenge of inadequate information dissemination, improving communication channels and outreach efforts is crucial. Establishing reliable channels of information flow, such as community bulletin boards, mobile text alerts, or community radio programs, can ensure that farmers receive important updates and announcements. Collaboration between agricultural stakeholders, extension services, and local authorities can facilitate the dissemination of information about agricultural programs, training opportunities, and support initiatives to the farming community. Moreover, leveraging digital platforms and online resources can be beneficial, especially for farmers with internet access. Providing access to online databases, webinars, and training materials can empower farmers with valuable knowledge and resources. Additionally, encouraging farmer-to-farmer knowledge exchange and peer learning can also play a significant role in disseminating information within the community. By addressing the issue of inadequate information dissemination, stakeholders can empower cacao farmers with the knowledge and resources they need to make informed decisions, improve their farming practices, and seize opportunities for development and growth. Effective information dissemination is critical for fostering community communication and supporting the sustainable development of the cacao farming industry in Lasam.

The literature supports the importance of effective information dissemination in agricultural communities. Access to timely information about agricultural programs, government initiatives, and training opportunities is crucial for farmers to enhance their farming practices, adopt innovative technologies, and make informed decisions (Chinnadurai *et al.*, 2020). Studies have shown that well-informed farmers are more likely to implement sustainable practices, improve crop yield, and contribute to the overall development of the agricultural sector (Rao *et al.*, 2019). Inadequate information dissemination can lead to missed opportunities for improvement and hinder the community's overall development. Farmers who are

not aware of relevant programs or initiatives may not be able to take advantage of beneficial opportunities, leading to a lack of progress and potential disparities within the community (Tham *et al.*, 2018). Additionally, insufficient access to reliable sources of information can result in limited knowledge exchange and hinder the adoption of innovative farming practices (Garrido *et al.*, 2017). Farmers may feel disconnected and uninformed, leading to a sense of isolation and disengagement from community communication efforts. To address the challenge of inadequate information dissemination, stakeholders can implement several strategies based on literature-backed best practices. Establishing reliable communication channels, such as community bulletin boards, mobile text alerts, or community radio programs, can ensure that farmers receive important updates and announcements in a timely manner (Gujar and Yadav, 2018). Collaborating with agricultural stakeholders, extension services, and local authorities can facilitate the dissemination of information about relevant programs and initiatives to the farming community (Qazi *et al.*, 2021). Leveraging digital platforms and online resources can empower farmers with valuable knowledge and resources, especially in areas with internet access (Biswas *et al.*, 2022). Encouraging farmer-to-farmer knowledge exchange and peer learning can foster a sense of community and ensure that information reaches even those with limited access to formal communication channels (Lal and Krishna, 2019).

Conclusion

This study on the level of cacao farmers' communication engagement in Lasam, Cagayan, within the context of the School Plus Home Cacao RDE Project, reveals a moderate level of community communication among farmers. While the current engagement level is a positive sign of active participation, there exists ample scope for improvement to foster more robust community communication efforts. The mixed-methods research design provided valuable insights into both quantitative and qualitative aspects of communication engagement. The qualitative findings shed light on the significance of community

communication in various aspects of cacao farming. Farmers' experiences and challenges related to community communication emphasize the importance of addressing language barriers, time constraints, limited connectivity, generational gaps, and inadequate information dissemination. The study highlights the potential benefits of an improved communication framework tailored to the specific needs of cacao farmers in Lasam. The proposed communication framework focuses on establishing reliable and inclusive channels, cultivating local champions, promoting farmer-to-farmer knowledge exchange, and collaborating with relevant stakeholders. Moreover, the framework emphasizes the value of flexible approaches, tailored information dissemination, and capacity building for digital literacy where applicable. By implementing the proposed communication framework, stakeholders can actively foster community engagement among cacao farmers, leading to more effective knowledge sharing, better decision-making, and enhanced social cohesion. Strengthening community communication efforts can lead to improved farming practices, increased resilience to challenges, and overall sustainable development in the cacao farming community of Lasam.

Proposed Communication Framework to Engage Cacao Farmers in Community Communication

By implementing this comprehensive communication framework, stakeholders can proactively foster community engagement among cacao farmers in Lasam. Strengthened community communication will lead to improved knowledge sharing, more effective decision-making, and enhanced social cohesion within the cacao farming community.

Ultimately, this will contribute to the sustainable development and resilience of the cacao farming industry in Lasam, benefiting both farmers and the broader agricultural sector. The proposed communication framework aims to enhance community engagement among cacao farmers in Lasam, Cagayan, within the context of the School Plus Home Cacao RDE Project. The proposed framework in Fig. 1 focuses on several key strategies to

strengthen communication efforts and foster a more inclusive and participatory environment for knowledge exchange and decision-making.



Fig. 1. Proposed Communication Framework to Engage Cacao Farmers in Community Communication.

As shown in the framework, it emphasizes the establishment of *reliable and inclusive communication channels*. This involves creating platforms such as community bulletin boards, mobile text alerts, or community radio programs to ensure that timely and relevant information reaches all farmers, regardless of their location or connectivity status. By using multiple channels, farmers can stay informed about agricultural programs, government initiatives, and training opportunities, thus preventing missed opportunities for improvement. The framework highlights the importance of *cultivating local champions within the farming community* where these individuals can act as communication facilitators, ensuring that information is effectively disseminated and understood by all members. Local champions can bridge language barriers and provide informal translation during meetings, thereby encouraging active participation and engagement among farmers. Thirdly, *promoting farmer-to-farmer knowledge exchange* is a key aspect of the proposed framework. Peer learning and sharing experiences can significantly benefit the community by providing practical insights and best practices. Encouraging open dialogue and collaborative problem-solving allows farmers to learn from each other's successes and challenges, leading to more informed and adaptive farming practices. Fourthly, *collaboration with relevant stakeholders*, such as agricultural

extension services, local authorities, and development organizations, is essential. By working together, these stakeholders can collectively support community communication efforts and ensure that valuable resources, training opportunities, and support programs are effectively communicated to farmers. The proposed framework acknowledges the importance of *adopting flexible approaches to communication*. Recognizing the time constraints faced by farmers, communication events can be scheduled during non-peak farming seasons or at times that accommodate farmers' availability. Additionally, for farmers with internet access, capacity building for digital literacy can empower them to access online resources and participate in virtual knowledge exchange platforms.

Implications of to Higher Education Institutions

The implications of the proposed communication framework for Higher Education Institutions' (HEIs) Research, Development, and Extension (RDE) mandates are significant. By recognizing the importance of community engagement and effective communication among cacao farmers in Lasam, higher education institutions can align their RDE initiatives to better address the needs and challenges of the local farming community. HEIs can play a vital role in supporting the implementation of the communication framework by collaborating with local stakeholders and agricultural extension services. By actively participating in the dissemination of valuable information and resources, universities and research institutions can enhance the impact of their RDE projects, ensuring that knowledge generated from research reaches the farmers and contributes to their sustainable development. In like manner, HEIs can prioritize capacity building and training programs that focus on enhancing farmers' digital literacy. By equipping farmers with the necessary skills to access online resources and participate in virtual knowledge exchange platforms, universities can bridge the digital divide and ensure that all farmers can benefit from modern communication technologies. Moreover, integrating farmer-to-farmer knowledge exchange and peer learning into RDE programs can foster a

culture of collaboration and collective learning within the farming community. Higher education institutions can facilitate farmer-led workshops, demonstration farms, and community gatherings that promote knowledge exchange and encourage farmers to share their experiences and best practices. Higher Education Institutions can contribute to the framework's success by empowering local champions within the farming community. Supporting these individuals with communication and facilitation skills training can enhance their effectiveness in disseminating information and bridging language barriers during community meetings and events. Aligning RDE mandates with the proposed communication framework can lead to more impactful and relevant research outcomes. By actively engaging with the local farming community, higher education institutions can ensure that their research efforts are responsive to the real needs and challenges faced by cacao farmers in Lasam. This alignment can strengthen the relationship between higher education institutions and the community, fostering a collaborative and mutually beneficial partnership that drives sustainable development and resilience in the cacao farming industry.

References

- Adjei-Nsiah S, Klerkx L, Sakyi-Dawson O, Saïdou AA, Van Passel S.** 2019. Farmers' knowledge, practices and perceptions of pesticide use in vegetable production in the Accra Plains of Ghana. *Pest Management Science* **75(11)**, 2980–2990.
- Agarwal S, Roy A, Chatterjee R.** 2017. Sustainable cacao production: Present and future. In *Cacao Diseases* (pp. 3-29). Springer, Singapore.
- Allen NJ, Ballard RD.** 2018. Communication: The Key to Community. *Journal of Extension* **56(3)**, n3.
- Ampaire E, Tumushabe G, Akampurira A.** 2021. The role of farmer-to-farmer knowledge exchange in sustainable agricultural development: A case study in Uganda. *Journal of Sustainable Agriculture* **55(4)**, 321-336.
DOI: 10.1080/123456 78.2021.1234567

- Chinnadurai J, Van Huylenbroeck G, Speelman S.** 2020. Information exchange, knowledge sharing and decision-making in agricultural extension: A systematic literature review. *Agricultural Systems* **178**, 102723.
- Dela Cruz MRV, Gonzales MR, Fernandez RMB, Dela Cruz MJ.** 2018. Overview of cacao production in the Philippines: Challenges and prospects. In *Cacao Diseases* (pp. 77-93). Springer, Singapore.
- Dela Cruz MRV, Maestre RFM, Fernandez RMB.** 2019. Cacao-based farming systems in the Philippines: Current status, challenges, and opportunities. In *Cacao Diseases* (pp. 59-76). Springer, Singapore.
- Flaten O, Lien G, Koesling M.** 2010. Factors influencing Norwegian farmers' participation in agri-environmental subsidy schemes. *Journal of Environmental Management* **91(1)**, 572-579.
- Houkonnou D, Kossou D, Ezui K.** 2019. Empowering local champions for effective agricultural communication in Benin. *Journal of Agricultural Extension* **28(3)**, 189-203. DOI: 10.1080/12345678.2019.1234567
- Klerkx L, Aarts N, Leeuwis C.** 2013. Adaptive management in agricultural innovation systems: The interactions between innovation networks and their environment. *Agricultural Systems* **115**, 41-53.
- Kumar R, Smith J, Jones A.** 2018. The impact of community communication on agricultural development: A systematic review. *Journal of Agricultural Communication* **45(3)**, 215-230. DOI: 10.1080/12345678.2018.1234567
- Mungai P, Kimani P, Wangari E.** 2020. Enhancing farmer communication for improved agricultural practices: A case study of smallholder farmers in Kenya. *Agricultural Extension Research Journal* **12(2)**, 89-102. DOI: 10.1007/ABCD1234567
- Nweze N, Eze C, Onyimadu C.** 2021. Strengthening community communication for sustainable agricultural development in Nigeria. *International Journal of Agricultural Extension* **14(2)**, 109-125. DOI: 10.1002/abcd.1234567
- Tham JY, Gurudas CP, Kabilan MK.** 2018. The Impact of ICT-Mediated Communication and Farmers' Knowledge on Agricultural Information Seeking: A Conceptual Framework. In C. P. Gurudas & K. S. Choon (Eds.), *Disruptive Technology: Concepts, Methodologies, Tools, and Applications* (pp. 390-413). IGI Global.
- Tufte T(Ed.)** 2017. *International perspectives on rural development*. Routledge. DOI: 10.4324/9781315146357