Bridging Education and Livelihood: Extent, Current Status, And the Challenges in Establishing a Farm School

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Abstract — The establishment of farm schools has emerged as a vital strategy to advance agricultural education, improve rural livelihoods, and strengthen technical–vocational competencies among secondary learners. This study investigated the extent of challenges, opportunities, justifications, and perceived implementation status of the Farm School in Saguing, involving school administrators and teachers, community representatives, and students. Utilizing a descriptive–correlational design, the study employed structured questionnaires and Likert-scale surveys to assess demographic profiles, operational challenges, perceived opportunities, program justifications, and current operational status. Data were analyzed through mean, standard deviation, Spearman's rank correlation, and multiple linear regression to determine the significance of relationships among variables. Findings revealed that administrators and teachers experienced the highest extent of challenges, especially in budgetary, infrastructural, and institutional support (M = 3.96, SD = 0.27), while community representatives and students

reported moderate challenges related to resource access and coordination. Opportunities and justifications were strongly acknowledged across groups, underscoring the program's alignment with agricultural productivity goals and the demand for contextualized TVL–Agri education. Perceived status ratings showed that administrators assessed implementation as exceeding expectations ($M = 3.67$, $SD = 0.47$), whereas students and community representatives rated several areas as meeting expectations. Correlation analyses established significant positive relationships between respondent profiles and both the extent of establishment ($r = .750$ to $.229$, $p < .05$) and perceived status ($r = .718$ to $.247$, $p < .05$), indicating that experience, exposure, and stakeholder involvement shape program evaluation. Regression results further confirmed that the extent of establishment significantly predicts the farm school's current status ($F(1,117) = 5.7617$, $p = .01796$), highlighting the importance of strengthening foundational components to enhance operational outcomes. Overall, the study emphasizes that leadership capacity, community engagement, and resource mobilization are critical drivers of sustainable and effective farm school implementation.

Keywords — Farm School, Agricultural Education, Technical-Vocational-Livelihood, Rural Development, Program Implementation

I. INTRODUCTION

Education serves as a cornerstone for national development, providing individuals with the knowledge, skills, and values necessary to contribute meaningfully to society. In a rapidly changing world, where socioeconomic demands continuously evolve, there is a growing need to link academic learning with practical livelihood opportunities. Bridging education and livelihood has become a critical agenda in addressing issues of unemployment, underemployment, and rural poverty—especially in agricultural communities where the majority of the population depends on farming for survival. Within this context, the establishment of farm schools presents an innovative approach that integrates theoretical instruction with hands-on agricultural training, thereby empowering learners to become productive, self-reliant, and community-oriented individuals.

The growing emphasis on Technical-Vocational Education and Training (TVET) and the Department of Education's initiatives toward contextualized learning further highlight the importance of aligning education with the realities of local industries. Farm schools, as community-based learning institutions, exemplify this alignment by promoting agricultural innovation, entrepreneurship, and sustainable development. However, while the concept holds promise, the actual extent of implementation, the current operational status, and the challenges faced by these institutions remain areas that require systematic examination.

Agriculture continues to serve as the foundation of rural communities in the Philippines, providing both livelihood and cultural identity. Despite its enduring importance, the agricultural sector is challenged by persistent issues such as low productivity, limited access to technology, aging farmers, and declining interest among the youth (Briones & Felipe, 2023). The Philippine Development Plan (2023–2028) underscores the urgency of revitalizing agriculture, not only for food security but also as a means to alleviate poverty and foster rural development (National Economic and Development Authority [NEDA], 2023). This concern is amplified in provinces such as Siquijor, where the agricultural economy is small, heavily reliant on coconut production, and limited in both diversification and modernization (Philippine Statistics Authority [PSA], 2023).

Background and Rationale

"Education is the most powerful catalyst when it mirrors the realities of people's lives." This perspective encapsulates the global movement toward education that is practical, responsive, and transformative. Internationally, organizations such as UNESCO and the Food and Agriculture Organization (FAO) have underscored the importance of Education for Sustainable Development (ESD) and agrological education in achieving the United Nations Sustainable Development Goals (SDGs), notably SDG 4 (Quality Education) and SDG 2 (Zero Hunger) (UNESCO, 2017; FAO, 2019). UNESCO's Greening Education initiatives and FAO-supported models such as Farmer Field Schools demonstrate how agriculture-integrated education cultivates practical skills, ecological awareness, and economic empowerment (FAO, 2018; UNESCO, 2021). These

international frameworks affirm the value of linking classroom learning with real-world farming practices, allowing young learners to contribute meaningfully to their communities while pursuing sustainable livelihood pathways (Barbier & Burgess, 2019).

At the national level, agriculture remains a vital yet underdeveloped sector in the Philippines. Approximately 22% of Filipinos are employed in agriculture, yet the sector contributes only 8.9% to the national GDP (PSA, 2023). This productivity gap is attributed to the aging farmer population—averaging 57 years old—and the waning interest of the youth in farming (Tolentino, 2020). In response, Republic Act No. 10618, or the Rural Farm Schools Act of 2013, mandates the Department of Education (DepEd) to establish at least one farm school per province, with curricula that integrate academic and technical-vocational learning to prepare students for agripreneurship and rural innovation (Congress of the Philippines, 2013). Further institutional support was provided through DepEd Order No. 47, s. 2016, which recognizes farm schools as alternative learning delivery models linked to the Technical Education and Skills Development Authority (TESDA) and the Department of Agriculture (DepEd, 2016).

Regionally, prior to 2025, Region VI had fully operational DepEd-run farm schools totaling 31 (DepEd, 2024). In April 2025, the DepEd–Negros Island Region announced its initiative to replicate the model in Negros Oriental and Siquijor, demonstrating growing policy support for localized agricultural education (DepEd–NIR, 2025). However, Siquijor Province continues to face the absence of a fully functioning farm school despite its dependence on coconut farming, minimal crop diversification, and continuous youth outmigration (SEARCA, 2022). This mismatch between policy mandates and ground-level implementation underscores a pressing need to develop context-appropriate, scalable farm school models for small-island provinces like Siquijor.

Despite the global and national recognition of farm schools as vehicles for integrating education and livelihood, gaps in research and practice persist particularly in rural and island communities.

First, there is an absence of localized data on the feasibility and operational requirements of farm schools in micro-settings. Existing studies largely focus on larger provinces or national

models (Aquino et al., 2021; Bulaon, 2019), leaving unexamined the realities of smaller communities such as Barangay Saguing, Maria, Siquijor.

Second, there is a lack of context-appropriate leadership and resource models. School heads and administrators in small-island settings often face limited institutional capacity, requiring them to assume multiple roles amidst resource scarcity (Dayagbil et al., 2021). This leadership strain—combined with inadequate teacher training and weak external linkages—poses barriers that remain underexplored in existing literature.

Third, there is no systematic assessment of stakeholder perceptions regarding the establishment of farm schools in Siquijor. Successful implementation depends on the shared understanding of multiple stakeholders—school administrators, TVL coordinators, teachers, parents, learners, and local government officials—whose perspectives on organization, budgeting, infrastructure, and institutional support remain undocumented (SEAMEO INNOTECH, 2020).

Fourth, the alignment between global frameworks and local realities remains limited. While UNESCO's ESD and FAO's Farmer Field School frameworks emphasize sustainability, innovation, and community engagement (UNESCO, 2021; FAO, 2018), Philippine-based studies rarely explore how these models can be meaningfully adapted to the challenges of small-island provinces (Manlosa et al., 2019).

Lastly, there is insufficient attention to agricultural innovation within the Technical–Vocational–Livelihood (TVL) Agri track of the K–12 curriculum. Initiatives led by UNEVOC and SEARCA advocate for positioning agriculture as an innovation-driven discipline to attract the youth (SEARCA, 2022). However, how secondary education—particularly the TVL–Agri strand—can serve as a platform for nurturing agri-entrepreneurship and innovation in isolated island communities remains unclear.

To address these gaps, this study examines the extent, current status, and challenges in establishing a farm school in Barangay Saguing, Maria, Siquijor, focusing on dimensions such as justification, organizational structure, budgetary requirements, institutional support, stakeholder perceptions, and anticipated barriers and opportunities. By doing so, the research bridges local

realities with national and international frameworks, contributing to both policy formulation and community-based educational innovation.

Drawing upon UNESCO's ESD framework and FAO's Farmer Field School model, the study aligns itself with global principles of sustainability-oriented, participatory, and livelihood-linked education (FAO, 2019; UNESCO, 2021). Regionally, it resonates with SEARCA and ASEAN educational directives promoting interdisciplinary curricula and community partnership as pathways to achieving SDG alignment (SEARCA, 2022).

Specifically, the study investigates how educational leadership mobilizes resources and partnerships, how teacher readiness aligns with TVL-Agri requirements, and how organizational and budgetary structures can ensure the sustainability of a proposed farm school. It captures the perspectives of stakeholders—school heads, teachers, learners, parents, and local officials—on the justification, feasibility, and potential impact of establishing such an institution in Siquijor.

This study is significant as it explores the intersection of education and livelihood through the establishment of a farm school in Barangay Saguing, Maria, Siquijor—a context where agricultural advancement and educational access are vital for sustainable rural development. By determining the extent, current status, and challenges of establishing such a school, the research contributes to the ongoing discourse on how education can serve as a practical tool for empowerment, productivity, and poverty alleviation in rural communities. The findings aim to bridge the gap between theoretical learning and real-world application, ensuring that learners acquire not only academic knowledge but also livelihood skills that can improve their quality of life and support community resilience.

For the Department of Education and local government units, the study provides empirical insights that may inform policy formulation, resource allocation, and program development related to contextualized and community-based education. For school administrators and curriculum developers, the results can serve as a guide in designing responsive curricula that integrate agricultural training, entrepreneurship, and sustainability principles. Teachers and instructional leaders may likewise benefit from strategies identified in the study for enhancing learner engagement through experiential, skill-based instruction.

Moreover, the study holds importance for community stakeholders and farmers, as it emphasizes participatory involvement and shared responsibility in sustaining agricultural education. The documentation of challenges encountered in farm school establishment will also be valuable to future researchers and policymakers, serving as a reference point for replication or improvement of similar initiatives in other localities. Ultimately, this research contributes to national goals of inclusive education, food security, and rural transformation, aligning with the broader objectives of the Sustainable Development Goals (SDGs), particularly those related to quality education, decent work, and sustainable communities

This study is limited to the feasibility and planning stages of establishing a farm school in Barangay Saguing, Maria, Siquijor. While it does not assess long-term outcomes such as productivity or graduate employability, it provides an essential groundwork for educational planning and leadership strategies.

Ultimately, this study posits that the establishment of a DepEd-aligned Farm School in Barangay Saguing, Maria, Siquijor, supported by strong agricultural leadership, competent human resources, adequate infrastructure, active community collaboration, and sustainable financing mechanisms, can serve as a replicable model for bridging education and livelihood in marginal island settings. It envisions the farm school not merely as an educational institution but as a transformative community hub where academic instruction, technical-vocational skills, and agricultural entrepreneurship converge to promote self-reliance, productivity, and innovation.

Anchored in global development frameworks such as the United Nations Sustainable Development Goals (SDGs) and aligned with national directives on inclusive and contextualized education, this initiative underscores the vital role of localized learning environments in fostering both human capital and rural advancement. By responding directly to the educational and economic realities of Siquijor, the proposed model advances the discourse on how education can effectively serve as a catalyst for empowerment, food security, and sustainable livelihoods. Hence, the study provides both theoretical and practical insights that can inform future policies, guide curriculum development, and inspire community-driven agricultural education initiatives across similarly situated rural and island provinces.

Literature Review

The Review of Related Literature provides the scholarly foundation upon which this study on bridging education and livelihood through the establishment of a farm school in Barangay Saguing, Maria, Siquijor, is anchored. It synthesizes theoretical perspectives, policy frameworks, and empirical studies that elucidate how education can serve as a driver of agricultural innovation and sustainable community development. By situating the proposed farm school within global, national, and local contexts, this review examines how educational initiatives have historically evolved to respond to livelihood needs, particularly in rural and small-island environments. The discussion is organized into two major parts: the conceptual literature, which explores the theoretical, philosophical, and policy underpinnings of agricultural and technical-vocational education; and the research literature, which surveys empirical studies conducted both internationally and locally. The synthesis underscores how the present study contributes uniquely by addressing the contextual realities of Siquijor, where research and implementation of farm schools remain limited. Through this review, the study establishes the intellectual and empirical grounding necessary for developing a localized, sustainable, and innovation-driven model of agricultural education aligned with both national directives and international sustainable development frameworks.

Conceptual Literature

Farm-based education has long been recognized as a vital instrument for promoting sustainable agriculture and advancing rural development. The Food and Agriculture Organization (FAO, 2018) underscored that agricultural training is crucial in improving farm productivity, enhancing food security, and ensuring the sustainability of agricultural systems. Likewise, UNESCO (2019) highlighted that agricultural education contributes significantly to lifelong learning and inclusive education by equipping learners with both academic and practical competencies essential for sustainable livelihoods. Within this framework, farm schools emerge as innovative learning environments where theoretical knowledge and hands-on agricultural

practice intersect—empowering learners to apply what they learn directly to real-world challenges within their communities.

Grounded in Bandura's Social Learning Theory (1977), farm schools embody the principle that individuals learn most effectively through observation, imitation, and social interaction. Learners acquire agricultural skills by engaging in authentic, community-based experiences alongside peers, teachers, and local farmers. Complementing this, Rogers' Diffusion of Innovation Theory (2003) provides a conceptual lens for understanding how farm schools serve as conduits for the dissemination of agricultural technologies and best practices. By facilitating the adoption of innovative farming techniques, farm schools become vital platforms for local knowledge transfer and agricultural modernization. The Sustainable Development Report (2021) further reinforces this idea, linking agricultural education to several Sustainable Development Goals (SDGs)—including quality education, zero hunger, and sustainable communities—underscoring the role of institutional support in advancing innovation and resilience in rural areas.

In line with these global frameworks, Technical and Vocational Education and Training (TVET), as emphasized by UNESCO (2015), serves as a cornerstone of inclusive and sustainable economic growth. TVET programs aim to align education with labor market needs, and farm schools exemplify this approach by integrating agricultural instruction with entrepreneurship and technical competencies. Similarly, the FAO (2020) recognized that agricultural education is instrumental in realizing SDG 2 (Zero Hunger) and SDG 4 (Quality Education) by strengthening resilience, promoting sustainable production systems, and supporting food security at the local level.

The role of experiential and community-centered learning in sustaining rural livelihoods is also emphasized by the United Nations Development Programme (UNDP, 2019). This aligns with Kolb's Experiential Learning Theory (1984), which conceptualizes learning as a cyclical process of experience, reflection, conceptualization, and experimentation. Farm schools exemplify this model by offering concrete agricultural experiences that deepen learners' understanding and transform abstract concepts into applicable knowledge.

Furthermore, Freire's Pedagogy of the Oppressed (1970) positions education as a liberating force that empowers marginalized communities to become co-creators of knowledge rather than passive recipients. Reinterpreted in the context of rural education, this perspective frames farm schools as agents of social transformation, promoting critical consciousness and self-reliance among learners. Consistent with UNESCO's Education for Sustainable Development (ESD) Framework (2020), such pedagogical models emphasize contextualized, participatory, and transformative approaches that cultivate ecological awareness and community responsibility.

Complementary to these perspectives are theories of place-based education advanced by Smith and Sobel (2010), which advocate for grounding instruction in the cultural and environmental realities of local settings. Farm schools embody this by situating learning within the agricultural landscapes and social contexts of the community, fostering a deeper connection between learners and their environment. Similarly, Lave and Wenger's (1991) Communities of Practice Theory provides a useful framework for understanding how farm schools create collaborative learning ecosystems, where teachers, students, and farmers engage in shared agricultural practices that lead to collective growth and innovation.

In the Philippine context, several policy frameworks support the institutionalization of farm-based education. DepEd Order No. 47, s. 2016 outlines the establishment and operation of integrated farm schools, emphasizing alignment with the Department of Agriculture's (DA, 2021) agenda for modernization and sustainability. The Technical Education and Skills Development Authority (TESDA, 2018) further connects farm schools with National Competency (NC) certifications to ensure that graduates possess market-recognized skills. Meanwhile, CHED (2020) advocates agro-industrial education as part of the Philippine Development Plan, responding to pressing issues such as youth disengagement from agriculture and threats to national food security (PSA, 2022).

Scholarly perspectives reinforce these institutional commitments. Brooke and McLachlan (2019) conceptualize farm schools as centers of rural innovation, fostering local adaptation and agricultural creativity. Altieri and Toledo (2011) emphasize the role of agroecology education in promoting ecological balance and sustainability, while Barlett (2017) and Darling-Hammond et

al. (2020) underscore the pedagogical value of "learning by doing" through project-based and applied learning models. Empirical findings from Ngugi et al. (2015) in Kenya demonstrate that farm-based education enhances student engagement, agricultural literacy, and community collaboration—outcomes that resonate with the goals of this study in Siquijor.

From a sustainability lens, the Brundtland Report (1987) laid the conceptual foundation for integrating education and sustainable development. Building on this, Sterling and Tilbury (2010) argue that sustainability should function as both content and pedagogy in the curriculum, promoting critical reflection and adaptive learning. Likewise, Pretty and Chambers (2016) emphasize participatory approaches to agricultural extension—an approach that aligns with the community-driven character of farm schools. Recent scholarship by Dumont, Istance, and Benavides (2016) also connects ecological literacy and innovative learning environments with the transformative potential of education in agriculture, further highlighting the farm school as a model for bridging education and livelihood in rural and island contexts.

This study is anchored on the Input–Process–Output (IPO) model, which serves as a systematic framework for understanding how initial resources and conditions are transformed into meaningful outcomes. As articulated by Calmorin and Calmorin (2012), the IPO framework provides a logical means to examine the dynamic relationships among variables that influence planning, implementation, and evaluation in an educational context. In this study, the model provides a structured lens through which the proposed establishment of a farm school in Barangay Saguing, Maria, Siquijor, is examined—not merely as a theoretical construct, but as a practical, community-based initiative that bridges education and livelihood while aligning with national directives for sustainable rural development.

At the input stage, the framework considers the demographic and socioeconomic characteristics of key stakeholders such as school administrators, teachers, students, and community representatives from local government units. These inputs provide the foundational data necessary to design an educational model responsive to community realities. Information on educational attainment, livelihood practices, and existing agricultural activities—particularly in a community primarily engaged in coconut farming and subsistence agriculture—offers a crucial

understanding of the readiness of local residents to participate in and benefit from an agricultural education program. In line with UNESCO (2017) and Navarro (2020), this baseline context is essential for ensuring that the farm school reflects the lived experiences of the community and that educational innovation arises from local culture, environment, and economic needs. The input stage thus captures the conditions and characteristics that influence how the proposed farm school can effectively address the educational and livelihood aspirations of the people in Saguing.

The process component of the framework focuses on the transformative mechanisms that link the inputs to the intended outputs. It encompasses the perceptions, actions, and strategies that facilitate the operationalization of the farm school. One major process involves understanding stakeholders' perceptions and justifications for the establishment of the farm school, as these reflect the community's recognition of its potential benefits and their willingness to engage in the initiative. The process also includes examining the effectiveness of the proposed organizational structure and the comprehensiveness of the farm development plan, which determine the institution's capacity for governance, coordination, and sustainability. Another vital element concerns the feasibility of financial and logistical requirements, recognizing that funding availability and resource mobilization are essential for successful implementation. Moreover, the process highlights the importance of collaboration among parents, educators, learners, and local officials, demonstrating the role of shared governance and participatory leadership as emphasized by Briggs and Wohlstetter (2003) and Fullan (2016). The study also takes into account potential challenges and opportunities that may arise during the planning and establishment phases—such as infrastructure limitations, policy gaps, or community-driven innovations—that shape the overall feasibility of the project. Collectively, these processes demonstrate how community collaboration, stakeholder engagement, and resource management influence the capacity of the farm school to serve as a model for linking education with livelihood.

The output of this framework is envisioned as the development of a Comprehensive Farm School Establishment Guide, which represents both an academic contribution and a practical tool for other schools who would like to convert into a farm school. This guide integrates two key components: the programmatic and the documentary. The programmatic component includes the articulation of the farm school's vision, mission, and goals, as well as curriculum integration

strategies and sustainability measures to ensure long-term agricultural education. The documentary component, on the other hand, provides a structured template for preparing applications for farm school establishment, including sections on justification, governance, curriculum design, farm layout, budget proposals, stakeholder commitments, and strategies for addressing identified challenges. Through these outputs, the framework ensures that the farm school model is not only grounded in theoretical principles of educational leadership, experiential learning, and sustainability but also aligned with the administrative and policy requirements of national agencies such as the Department of Education (DepEd, 2019) and the Department of Agriculture (DA, 2020).

Overall, this conceptual framework illustrates a logical flow from community realities to practical outcomes. The demographic and socioeconomic characteristics of Barangay Saguing (inputs) are processed through a participatory and systematic assessment of stakeholder perceptions, institutional structures, financial feasibility, and contextual challenges (process), resulting in the formulation of a comprehensive, evidence-based establishment guide (output). In doing so, the framework demonstrates how education can serve as an instrument for livelihood enhancement, agricultural innovation, and rural empowerment. Ultimately, it positions the proposed farm school in Saguing, Maria, Siquijor, as a model for bridging education and livelihood in other rural and island communities that aspire toward inclusive, sustainable, and community-driven development.

Research Literature

Globally, the integration of education and livelihood through agricultural training is deeply rooted in the principles of Education for Sustainable Development (ESD) as advocated by UNESCO (2020). The ESD framework emphasizes contextualized, experiential learning that equips learners with the knowledge and skills necessary to promote sustainable agriculture and rural development. Similarly, the Food and Agriculture Organization's (FAO, 2020) *Farmer Field School* model underscores the importance of participatory, practice-based education that enhances agricultural competencies while fostering environmental stewardship. These frameworks align

with the current study's objective of establishing a community-based farm school that promotes sustainable livelihoods in Siquijor.

Kolb's Experiential Learning Theory (1984) further supports the pedagogical foundation of farm schools, emphasizing the cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation. This approach enables learners to apply classroom knowledge in real agricultural settings—precisely the kind of integration envisioned by the current research. Complementing this, Bandura's Social Learning Theory (1997) and Vygotsky's Social Constructivist Theory (1978) reinforce the idea that social interaction, collaboration, and modeling play critical roles in skill acquisition, particularly in community-oriented education systems such as farm schools.

The Sustainable Livelihoods Framework (DFID, 1999) and Community-Based Resource Management Model (FAO, 2020) provide further conceptual grounding. They highlight the interconnectedness of human, natural, financial, and social capital—resources that farm schools can mobilize to improve rural productivity and resilience. Freire's Pedagogy of the Oppressed (1970) also finds relevance, as it promotes empowerment-based education that transforms learners into active agents of change within their communities, resonating with the transformative intent of the present study.

At the policy level, Republic Act No. 10618 or the *Rural Farm Schools Act of 2013* institutionalizes the integration of agricultural education into the K–12 Technical-Vocational-Livelihood (TVL) track. DepEd Order No. 47, s. 2016 operationalizes this mandate, providing the framework for establishing farm schools as venues for practical learning and agripreneurship. These policies emphasize the alignment of educational outcomes with national development goals, including Sustainable Development Goals (SDGs) 2 (Zero Hunger) and 4 (Quality Education), both of which underpin the study's goal to design a farm school model responsive to local contexts.

Scholars such as Tilbury (2021) and Sterling (2020) assert that sustainability education transforms not just learners but entire communities. Their views support the study's focus on bridging education and livelihood by establishing learning systems that directly impact local economies. In this sense, conceptual literature consistently reinforces the idea that educational

institutions, when linked to livelihood initiatives, can drive holistic and inclusive community progress.

Across international contexts, numerous studies have demonstrated the potential of farm schools to strengthen agricultural and livelihood outcomes. Mwangi (2016) in Kenya revealed that students from farm schools developed higher levels of agricultural entrepreneurship compared to peers in traditional schools. Similarly, Kim (2018) in South Korea found that integrating agricultural education reduced rural-to-urban migration by fostering local employment. Mensah (2019) in Ghana emphasized that farm schools contributed significantly to household food security, while Lopez (2017) in Mexico showed that school gardens improved students' nutritional outcomes and awareness of food systems. These studies share a thematic connection with the present research, emphasizing education as a vehicle for economic and community empowerment.

More recently, Osei (2020) documented the challenges faced by Nigerian farm schools, including limited funding, weak institutional support, and poor infrastructure—barriers that mirror those identified in Siquijor. Similarly, Rahman and Singh (2021) explored agricultural education initiatives in South Asia and noted that program sustainability relied heavily on local government partnerships and teacher training, echoing the current study's findings on leadership and resource mobilization.

The FAO (2018) and UNESCO (2019) both reaffirmed the importance of agricultural education in achieving sustainable development. Moreover, the Sustainable Development Report (2021) positioned education-based livelihood programs as catalysts for achieving multiple SDGs, suggesting that the farm school model represents a multidimensional strategy for rural advancement.

In the Philippine context, several scholars have analyzed the evolution and impact of farm schools. Dela Cruz (2016) found that integrated farm schools in Mindanao improved student competencies in agriculture and agribusiness. Reyes (2018) and Bautista (2017) highlighted their contribution to rural development and agricultural modernization. Abad (2019) underscored community participation as a critical element for sustainability, while Pasilan (2017) reported improvements in learner motivation within the TVL track.

Building on these earlier findings, Sumalapao (2020) identified teacher readiness and capacity building as major challenges. Santos (2018) revealed that parental support significantly affected learner retention, aligning with the present study's emphasis on stakeholder collaboration. Labrador (2021) linked farm schools with emerging agro-tourism initiatives, while Villanueva (2019) stressed the value of cooperative linkages in sustaining operations.

More recent research by Martinez, Lopez, and Rivera (2022) examined farm schools in the Visayas, highlighting their role in rural entrepreneurship and tourism synergy findings particularly relevant to Siquijor's tourism-oriented economy. Alipio (2020) found that integrating livelihood programs within schools reduced youth unemployment, echoing the core premise of the current research. Lim (2020) of Siquijor State College reported logistical challenges such as land acquisition and resource mobilization issues that the present study further explored in its local context.

Unpublished graduate works have also contributed valuable insights. Villarin (2021, unpublished master's thesis, Central Mindanao University) examined the readiness of rural schools to transition into farm school models, while Garcia (2020, unpublished dissertation, University of the Philippines Los Baños) analyzed farm-based learning as a catalyst for sustainable community development. These studies align with the current research in their focus on institutional preparation and community integration but differ in geographical and operational scope, as the present study centers on a province with limited farm school infrastructure.

The reviewed conceptual and research literature collectively affirm that farm schools are transformative platforms for integrating education and livelihood. The similarities among prior studies and the current one lie in their shared goals: promoting agricultural competencies, empowering communities, and addressing rural poverty. However, differences emerge in focus and context; most previous studies examined established institutions or broader regional trends, while the present study zeroes in on the *process of establishment* in a geographically small and resource-limited area like Siquijor.

Furthermore, while prior works often concentrated on *outcomes* such as learner performance or income generation, this study contributes by investigating *leadership practices,*

resource mobilization, and community participation as core dynamics of farm school development. By anchoring its inquiry in globally endorsed frameworks and nationally mandated programs, the study bridges theory and practice, offering a locally responsive model that aligns with both policy and community aspirations.

II. METHODOLOGY

Research Design

This chapter presented the methodological framework employed in the conduct of the study. It described the research design, locale of the study, respondents and sampling procedures, research instruments, data-gathering processes, and the statistical treatments utilized. Each methodological choice was carefully aligned with the objectives of the research—to determine the extent, current status, and challenges in establishing a farm school in Barangay Saguing, Maria, Siquijor—with the ultimate goal of developing a proposed farm school model responsive to local educational and livelihood needs.

The study employed a descriptive-survey research design anchored on the feasibility study framework. This combined approach was deemed most appropriate since it allowed for a systematic assessment of perceptions, resources, and institutional conditions that affected the establishment of a farm school. The descriptive-survey design facilitated the collection of quantifiable data regarding the experiences, judgments, and expectations of stakeholders, while the feasibility framework provided a practical lens for evaluating infrastructural readiness, institutional capacity, and sustainability potential.

As Creswell and Creswell (2018) emphasized, descriptive designs are particularly effective in portraying existing realities and identifying factors that shape program viability. By integrating feasibility elements, the study moved beyond mere description and explored the pragmatic dimensions of establishing a DepEd-aligned farm school. This dual framework enabled a holistic understanding of how educational innovations, agricultural resources, and community partnerships converged to support rural transformation.

Study Locale

This study was conducted in **Barangay Saguing**, one of the rural barangays in the Municipality of Maria, located in the Province of Siquijor, Central Visayas, Philippines. Maria is predominantly an agricultural municipality where farming remains a primary source of livelihood among households. Although Siquijor is known for its tourism potential, many of its barangays—including Saguing—retain strong agricultural foundations rooted in coconut farming, rice production, livestock raising, and backyard gardening. These agricultural characteristics make Barangay Saguing a strategic site for examining the feasibility and sustainability of establishing a farm school.

Barangay Saguing is geographically situated inland, accessible through local barangay roads connecting to the municipal center. The area is characterized by fertile lands suitable for diversified farming, availability of open spaces that can be utilized for learning farms, and a community that relies largely on agri-based economic activities. The presence of existing agricultural resources such as coconut plantations, rice fields, and livestock farms provides an environment conducive to hands-on, contextualized agricultural training—a core requirement for developing a Technical-Vocational-Livelihood (TVL)–Agri strand and DepEd-recognized farm school.

The barangay is also served by the Maria District public schools, wherein enrollment records show a growing number of learners expressing interest in agriculture-related subjects and vocational courses. However, despite this demand, access to specialized agricultural education within the municipality remains limited. Learners often need to travel to neighboring towns or provinces to enroll in agri-fishery programs or TESDA-accredited training centers. This gap underscores the importance of exploring a community-based farm school that can provide accessible, practical, and locally relevant agricultural education.

In terms of governance and community support, Barangay Saguing has active local officials who have expressed interest in strengthening agricultural productivity and youth engagement in farming. Local government units (LGUs), parents, farmers' associations, and community stakeholders have shown readiness to participate in programs that can uplift rural livelihoods. Moreover, the barangay's demographic composition—comprising school heads,

teachers, learners, farmers, parents, and LGU representatives—provides a diverse and relevant population for assessing the challenges, opportunities, and justifications related to establishing a farm school.

The selection of Barangay Saguing as the study locale is therefore appropriate, as it reflects both the need and potential for a contextualized agricultural education program. Its agricultural base, community readiness, and increasing demand for agri-skills training position it as an ideal environment for assessing the feasibility of a dynamic and sustainable farm school program for School Year 2025–2026.

Population and Sampling

The sample size for this study was determined using Slovin's Formula, which provides an efficient means of obtaining an adequate sample when the population size is known. This formula is often applied in descriptive studies to ensure representativeness while maintaining research manageability.

For this study, the population consisted of key stakeholders directly involved in the establishment of the farm school in Barangay Saguing, Maria, Siquijor, which included school administrators, teachers, learners, and community representatives such as parents, local government officials, and farmers. Based on validated records from the DepEd Schools Division of Siquijor and the Municipal Agriculture Office of Maria, the estimated total population (N) was 120 individuals.

To ensure a high level of reliability and confidence in the results, a margin of error (e) of 0.05 (5%) was applied, corresponding to a 95% confidence level, which is standard in social science and educational research. Substituting these values into the formula yields the following computation:

Thus, the computed sample size was approximately 92 respondents. However, to account for potential nonresponses and to further strengthen the reliability of the findings, the researcher

decided to round the sample to 119 respondents, which aligns with recommendations by Creswell and Creswell (2018) for descriptive research involving multiple respondent groups.

Table 1 presents the distribution of the respondent groups.

TABLE 1
DISTRIBUTION OF THE RESPONDENT GROUPS

Respondents	f	%
Administrators (Junior, Senior High & Extension Farm Head)	2	1.68
Teachers	7	5.88
Students	78	65.55
Community representatives	32	26.89
Total	**119**	**100.00**

The table indicated that the largest proportion of respondents were students (65.55%), followed by community representatives (26.89%), teachers (5.88%), and administrators (1.68%). This distribution ensured that both school-based and community-based perspectives were reflected, aligning with the participatory and integrative framework of farm school establishment.

Data Collection Procedures

Validated questionnaires were distributed to respondents across the province. Follow-ups ensured high retrieval, and completed surveys were checked before undergoing statistical processing.

The questionnaire captured school profiles, status of JDVP implementation, stakeholder perceptions, and challenges. It included Likert-scaled items measuring availability of resources, trainer competence, safety measures, student participation, and implementation processes.

Data Processing and Analysis

The data for this study were gathered using the validated survey questionnaire as outlined in the sampling procedure. The collected responses from the different stakeholder groups—such as school administrators, teachers, learners, and local government representatives—were carefully encoded, organized, and tabulated for analysis.

Descriptive and inferential statistical tools were employed to interpret the data in accordance with the research objectives. Descriptive statistics, such as frequency, percentage, weighted mean, and standard deviation, were used to summarize the demographic profile of the respondents and to determine the perceived extent of challenges, opportunities, and justifications in the establishment of the farm school. The weighted mean provided the overall assessment of responses, while the standard deviation indicated the degree of variability in perceptions among respondent groups.

Ranking was also utilized to determine which specific factors under each indicator—such as budgetary requirements, infrastructural support, community needs, and livelihood opportunities—were perceived as most or least significant.

To test the study's hypotheses, Analysis of Variance (ANOVA) was used to determine whether there were significant differences in the perceptions of internal and external stakeholders regarding the extent of challenges, opportunities, and justifications. For relationships between variables such as perceived challenges and management effectiveness, or opportunities and implementation status, Pearson's Product–Moment Correlation Coefficient (r) was employed to assess the strength and direction of associations.

Qualitative responses from open-ended items were subjected to thematic analysis, categorizing recurring themes such as institutional readiness, funding concerns, and anticipated benefits for community livelihoods. This mixed analytical approach ensured that both numerical and contextual dimensions of the data were adequately represented.

The results of these analyses were presented in tabular and narrative forms, aligned with the statement of the problem and hypotheses. This process enabled the study to draw evidence-

based conclusions and to propose a sustainable framework for the establishment and management of a farm school model in Siquijor.

Ethical Considerations

The study strictly adhered to ethical standards in educational research to protect the rights, dignity, and well-being of all participants. Prior to the commencement of data gathering, formal approval was sought from appropriate authorities, including the school division office, municipal and barangay local government units (LGUs), and administrators of the identified schools. Endorsement from the dissertation adviser and the research panel was secured to ensure compliance with institutional requirements.

Informed consent was obtained from all participants before their inclusion in the study. For school administrators, teachers, and LGU officials, written consent forms were distributed, clearly explaining the objectives of the study, the nature of participation, and the assurance of voluntary involvement. For learners, consent was obtained from both the students and their parents or guardians, ensuring that minors participated only with parental approval. All participants were informed of their right to withdraw from the study at any time without penalty or prejudice.

Confidentiality and anonymity were maintained throughout the research process. Respondent identities were not disclosed in any part of the study, and all data were coded to prevent individual identification. Responses were aggregated and reported only in summary form. Raw data, including completed questionnaires, were securely stored in password-protected digital files and locked cabinets accessible only to the researcher. After the completion of the study and publication of results, data were archived for a specified period and disposed of responsibly.

To further uphold research integrity, the study ensured that the questionnaire items were free from discriminatory, offensive, or misleading language, promoting fairness and inclusivity. The instrument underwent validation not only for content accuracy but also for ethical soundness to avoid psychological or social harm to respondents.

Finally, the researcher ensured that the findings were presented objectively and truthfully, avoiding any misrepresentation or fabrication of results. The output of the study - the Farm School Documentary Guide and Application Template was developed with respect to the local context and cultural sensitivity, aiming to serve the best interests of the community while upholding ethical standards.

III. RESULTS AND DISCUSSION

RESULTS

1. Demographic Profile

The demographic profile of the respondents revealed that school administrators were generally in the mid- to late-career stage, with ages ranging from 41 to 60 years old, reflecting considerable professional and leadership experience. Community representatives varied in age and professional background, indicating a diverse level of experience and exposure to agricultural and educational initiatives. Students, on the other hand, represented various grade levels in the secondary school, showing a mix of adolescent learners with limited but growing exposure to farm-based educational programs. This demographic composition provided a comprehensive perspective on the establishment of the Farm School from multiple stakeholder viewpoints .

2. Extent of Challenges, Opportunities, and Justifications

The study revealed that school administrators/teachers reported the highest extent of challenges in budgetary, institutional, infrastructural, and documentary support, with an average mean of 3.96 categorized as Strongly Agree (SA). Community representatives and students reported moderate challenges, with means of 3.13 and 2.65, respectively, categorized as Agree (A). Opportunities were strongly perceived across all groups, particularly by administrators/teachers (mean = 4.00, SA), followed by community representatives (3.77, SA), and students (3.52, SA), reflecting optimism for agricultural productivity, rural livelihood improvement, and contextualized secondary education. Justifications for the Farm School, such as

addressing community needs, agricultural resource availability, and demand for TVL–Agri programs, were consistently rated SA across all stakeholder groups (mean range 3.78–4.00), demonstrating a strong rationale for establishing the farm school.

3. Perception on the Current Status in the Establishment of a Farm School

Perceptions of the current status revealed variability across stakeholders. School administrators/teachers perceived the establishment as exceeding expectations (EE) with an average mean of 3.67, indicating progress in operational readiness, quality assurance, and compliance with legal requirements. Community representatives rated the status as EE (3.26), while students rated it as meeting expectations (ME) with a mean of 2.74. Specific areas requiring improvement included infrastructure and farm inputs/tools, particularly from the perspective of students and community representatives, suggesting gaps in resource provision and access.

4. **Significant Relationship between the Profile of the Respondent Groups and the Extent of Establishment of the Farm School**

The correlation analysis revealed statistically significant relationships between the demographic profiles of the respondents and the extent of the farm school's establishment. Using Spearman's rank correlation at a 0.05 significance level, the study found that all respondent groups demonstrated positive and significant correlations with the extent of establishment, leading to the rejection of the null hypothesis.

School administrators and teachers exhibited a strong and positive correlation ($r = .750$, $p = .020$), indicating that respondents with greater leadership experience, higher educational attainment, or more specialized agricultural training contributed substantially to the advancement of the farm school's establishment. Community representatives showed a moderate but significant relationship ($r = .359$, $p = .043$), suggesting that their socio-demographic characteristics, civic involvement, and familiarity with agricultural programs moderately influenced the effectiveness of school establishment efforts. Students demonstrated a weak yet statistically significant correlation ($r = .229$, $p = .044$), showing that while student characteristics such as age, interest, or prior agricultural exposure had the least influence, they still positively contributed to the extent of

establishment. Overall, results emphasize that profiles of all stakeholder groups meaningfully shape the extent to which the farm school has been successfully established.

5. **Significant Relationship between the Profile of the Respondent Groups and the Current Status in the Establishment of the Farm School**

A similar pattern of significant relationships emerged between respondent profiles and the perceived current status of the farm school. Based on Spearman's rank correlation using a 0.05 alpha level, all groups showed positive and significant associations, supporting the rejection of the null hypothesis.

School administrators and teachers demonstrated a strong and significant correlation ($r = .718$, $p = .029$), indicating that respondents with stronger professional qualifications and experience perceived the farm school's current status more favorably, particularly regarding compliance, readiness, and instruction. Community representatives displayed a moderate significant correlation ($r = .396$, $p = .025$), suggesting that their professional roles, community involvement, and familiarity with local governance influenced their assessment of the school's operational status. Students, although showing a weaker correlation ($r = .247$, $p = .029$), still had statistically significant perceptions that aligned with their level of exposure to facilities, farm tools, and hands-on activities. These findings collectively underscore the importance of stakeholder backgrounds in shaping judgments about the farm school's current progress.

6. Significant Relationship between the Extent of Establishment of the Farm School and the Current Status in the Establishment of the Farm School

The regression analysis showed that the extent of establishment significantly predicted the current status of the farm school. The model yielded a statistically significant result, $F(1,117) = 5.7617$, $p = .01796$, leading to the rejection of the null hypothesis. This indicates that improvements in the establishment process—such as enhanced infrastructure, increased staffing, stronger documentation, and better resource allocation—significantly contribute to a more favorable assessment of the farm school's current operational status.

Although the model's explanatory power was modest ($R^2 = 0.0469$), the significance of the relationship demonstrates that even incremental progress in establishment efforts yields

measurable improvements in the perceived current status. The adjusted R^2 value of 0.03879 confirms that approximately 3.88% of the variation in current status is influenced by the extent of establishment. These results imply that strengthening foundational components—such as facilities, administrative processes, and community alignment—directly enhances the school's operational readiness, quality assurance, and stakeholder satisfaction.

7. Challenges Encountered in the Establishment of a Farm School

The major challenges encountered included limited leadership capacity, coordination difficulties with LGUs and support agencies, insufficient staffing, and lack of access to specialized training for administrators and teachers. Community representatives faced difficulties in aligning resources, mobilizing stakeholders, and understanding farm school guidelines, while students experienced limited exposure to modern farming technologies, safety concerns, and challenges balancing academics with hands-on farm activities. These challenges highlight critical areas for intervention, particularly in capacity-building, resource provision, and safety protocols.

IV. CONCLUSION

The study concluded that the establishment of the Farm School in Saguing has been significantly influenced by the profiles, engagement, and capacities of key stakeholders, including school administrators, teachers, community representatives, and students. The findings indicate that strategic leadership, active community involvement, and continuous monitoring are critical to the successful implementation and sustainability of the farm school program. The interplay between stakeholder characteristics, the extent of establishment, and the current operational status underscores the importance of participatory, resource-supported, and well-managed educational interventions in enhancing agricultural education and Technical-Vocational-Livelihood competencies.

1. Demographic Profile

The respondents' profiles played a key role in the establishment and perception of the farm school. School administrators and teachers were generally in mid- to late-career stages (41–60

years old), reflecting considerable professional experience and leadership capacity. Community representatives displayed diverse age and professional backgrounds, while students represented various secondary grade levels with limited but growing exposure to farm-based education. These profiles influenced perceptions of challenges, opportunities, justifications, and operational status, highlighting the role of experience, education, and engagement in shaping program outcomes.

2. Extent of Challenges, Opportunities, and Justifications

Administrators and teachers reported the highest challenges (M = 3.96, SD = 0.27), primarily related to budgetary requirements, institutional support, and infrastructure. Community representatives and students noted moderate challenges (M = 3.13 and 2.65), mainly regarding coordination and resource access. Opportunities were strongly recognized by all groups, particularly administrators (M = 4.00, SD = 0.00), reflecting potential for agricultural productivity, skills development, and contextualized secondary education. Justifications for the farm school, such as meeting community needs, agricultural resource availability, and demand for TVL-Agri programs, were consistently rated high across all respondents.

3. Perception on the Current Status in the Establishment of a Farm School

Perceived operational status varied among stakeholders. Administrators rated the establishment as exceeding expectations (M = 3.67, SD = 0.47), while community representatives (M = 3.26) and students (M = 2.74) rated it as meeting expectations. Areas for improvement included infrastructure and availability of farm inputs/tools, highlighting gaps in resource provision and operational readiness from the perspective of students and the community.

4. Significant Relationship between the Profile of the Respondent Groups and the Extent of Establishment of the Farm School

Spearman's rank correlation analysis revealed statistically significant positive relationships between respondent profiles and the extent of establishment. The strongest correlation was observed among school administrators and teachers ($r = 0.750$, $p = 0.020$), indicating that greater experience, educational attainment, and specialized training strongly support farm school implementation. Community representatives exhibited a moderate correlation ($r = 0.359$, $p =$

0.043), while students showed a weak-to-moderate positive correlation (r = 0.229, p = 0.044). These results highlight that stakeholder profiles are key determinants in the successful establishment of the program.

5. Significant Relationship between the Profile of the Respondent Groups and the Current Status in the Establishment of the Farm School

Similarly, profiles were significantly associated with the perceived current status. Administrators and teachers demonstrated a strong correlation (r = 0.718, p = 0.029), reflecting their influence on implementation efficiency. Community representatives showed moderate correlation (r = 0.396, p = 0.025), while students had a weaker but significant association (r = 0.247, p = 0.029). These findings indicate that the demographic and professional characteristics of all stakeholder groups shape perceptions of operational readiness and effectiveness.

6. Significant Relationship between the Extent of Establishment of the Farm School and the Current Status in the Establishment of the Farm School

Regression analysis confirmed that the extent of establishment significantly predicts current operational status ($F(1,117) = 5.7617$, $p = 0.01796$; $R^2 = 0.0469$). Although the explained variance was modest, the results suggest that improvements in infrastructure, staffing, resource allocation, and program management contribute positively to operational effectiveness and stakeholder satisfaction.

7. Challenges Encountered in the Establishment of a Farm School

Key challenges included limited leadership capacity, coordination difficulties with LGUs and support agencies, insufficient staffing, and lack of access to specialized training. Community representatives faced difficulties in aligning resources and mobilizing stakeholders, while students experienced limited exposure to modern farming technologies, safety concerns, and balancing academics with farm activities. These challenges underscore the need for targeted interventions in capacity-building, resource provision, and safety protocols to enhance the program's sustainability and effectiveness.

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