

Challenges and Opportunities in the Implementation of Rural Farm School among Students

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ABSTRACT

This study examined the challenges and opportunities encountered by students in the implementation of the Rural Farm School (RFS) at Mahinog National High School in Camiguin. It employed a quantitative descriptive-survey design supplemented by informal interviews. Complete enumeration was used to include 76 Grade 7 and Grade 8 RFS students. A modified expert-validated questionnaire with a Cronbach alpha of .91 was administered, and the data were analyzed using frequency, percentage, weighted mean, standard deviation, Pearson correlation, z-test, and analysis of variance. Results showed that the students experienced implementation challenges to a high extent ($M = 3.63$, $SD = 0.29$). The most prominent concerns involved sustaining operational costs for demonstration farms and modern equipment ($M = 3.70$, $SD = 0.46$), addressing the shortage of qualified agricultural educators ($M = 3.67$, $SD = 0.50$),

improving the social perception of RFS, and strengthening facilities, partnerships, and monitoring systems. The detailed results reported no statistically significant relationship between challenges and opportunities ($r = .20$, $p = .089$). Perceptions of challenges did not significantly differ according to sex, family income, and livelihood source; however, a significant difference was reported according to household size, $F(2, 73) = 96.02$, $p < .001$. The findings indicate that RFS remains a valuable approach for experiential agricultural education, but its sustainability requires adequate resources, teacher development, stronger partnerships, and systematic program monitoring.

Keywords: *agricultural education, experiential learning, implementation challenges, rural development, Rural Farm School, sustainable farming*

INTRODUCTION

Agriculture remains an important livelihood base in rural communities, yet conventional schooling does not always address the practical learning needs of students living in agricultural areas. In the Philippines, Republic Act No. 10618 institutionalized Rural Farm Schools as an alternative delivery mode of secondary education. The program is intended to integrate academic learning with practical agricultural competencies and to equip rural youth with knowledge, skills, and values that may support community development and sustainable livelihoods (Republic Act No. 10618, 2013; Department of Education, 2015).

Rural Farm Schools are aligned with experiential and sustainability-oriented education because students learn through direct engagement with farming activities, demonstration sites, tools, community resources, and locally relevant production systems. UNESCO (2020) emphasized that education for sustainable development should help learners respond to environmental, social, and economic challenges. Likewise, the Food and Agriculture Organization of the United Nations (FAO, 2020) highlighted the importance of agricultural education and training in expanding opportunities for rural youth.

The implementation of farm-based education, however, is resource intensive. Demonstration farms require recurring operating funds, agricultural inputs, facilities, equipment, technical expertise, and sustained partnerships. Rural households may also face livelihood constraints that influence students' educational experiences. Briones (2020) described the continuing importance of agricultural employment in rural households, while Ellis (2000) emphasized the role of livelihood diversification in managing rural vulnerability.

This study assessed the challenges and opportunities encountered by Grade 7 and Grade 8 students participating in the Rural Farm School program at Mahinog National High School, Camiguin. It examined the students' socioeconomic profile, the extent of implementation challenges, the relationship between challenges and opportunities, and differences in perceived challenges across profile variables. The findings served as the basis for a strategic action plan for strengthening RFS implementation.

Literature Review

Rural Farm Schools and Experiential Agricultural Education

Rural Farm Schools connect classroom instruction with practical agricultural learning. Their relevance is consistent with the Rural Farm Schools Act of 2013 and its implementing rules, which recognize the need for an alternative delivery mode responsive to the conditions of rural communities (Republic Act No. 10618, 2013; Department of Education, 2015). Farm-based learning may develop agricultural knowledge, environmental awareness, and practical decision-making. A systematic review by Pflugh Prescott et al. (2020) found that farm-to-school activities can support student-related outcomes, while Goldman and Alkahrer (2024) emphasized the role of farm schools in environmental and sustainability education.

Rural Livelihoods and Student Context

Students' experiences of rural education are shaped by household conditions. Rural families frequently combine agricultural labor with fishing, construction, transportation services, and small enterprises to manage income variability. Ellis (2000) described livelihood diversification as a central rural strategy, while Briones (2020) characterized agricultural employment and household conditions in selected Philippine provinces. These conditions are relevant because access to resources, food security, and livelihood stability may influence students' participation in practical learning activities.

Implementation Requirements and Sustainability

Successful agricultural education depends on adequate resources, trained educators, institutional support, and community partnerships. FAO (2020) identified agricultural education and training as important mechanisms for empowering rural youth. UNESCO (2020) likewise emphasized the need for educational programs that are locally responsive and sustainable. Contemporary studies have also highlighted the value of agricultural learning for environmental citizenship and the potential of technology-supported extension approaches for farming communities (Goldman & Alkahrer, 2024; Santiago & Navarro, 2025).

Research Gap

Policy discussions commonly describe the goals of rural agricultural education, but student-centered evidence on day-to-day implementation remains limited. Assessing students' perceptions can reveal which constraints most directly affect learning and which opportunities remain valuable despite resource limitations. This study addressed that gap within the specific context of Mahinog National High School.

METHODS

Research Design

The study used a quantitative descriptive-survey design supplemented by informal interviews. The descriptive component measured the extent of implementation challenges and summarized the opportunities experienced by students. The interview responses were used to contextualize the quantitative findings.

Research Locale

The study was conducted at Mahinog National High School in Poblacion, Mahinog, Camiguin. The school is a designated Rural Farm School and offers junior and senior high school programs, including Technical-Vocational-Livelihood and General Academic Strand tracks.

Participants and Sampling Technique

The respondents were 76 Grade 7 and Grade 8 students enrolled in the Rural Farm School program. The study used complete enumeration or total sampling to include the identified student population.

Research Instrument

A modified questionnaire was used to gather data on the respondents' demographic profile, implementation challenges, opportunities, and interview responses. The instrument was reviewed by experts and obtained a Cronbach alpha coefficient of .91, indicating high internal consistency.

Data Gathering Procedure

Permission was secured from the relevant authorities before data collection. The respondents were oriented regarding the study, and the questionnaires were administered after informed consent was obtained. Completed responses were collected, tabulated, and prepared for analysis.

Data Analysis

Frequency and percentage were used to summarize the respondent profile. Weighted mean and standard deviation were used to determine the extent of challenges. Pearson correlation was used to examine the relationship between challenges and opportunities. The manuscript also reported z-test and analysis-of-variance procedures for comparisons across profile variables.

Ethical Consideration

The study secured the necessary permissions, explained the purpose and procedures to the respondents, obtained informed consent, and protected the confidentiality of the information collected. Participation was voluntary, and the data were used only for research purposes.

RESULTS AND DISCUSSION

Respondent Profile

The 76 respondents represented Grade 7 and Grade 8 RFS students. Males comprised 56.58% of the sample, while females comprised 43.42%. Household size was concentrated in the categories of four to five members and six or more members. Most respondents came from families earning ₱10,000 or less per month, and farm labor was the most frequently reported livelihood source. This profile reflects the rural and economically vulnerable context in which the RFS program operates.

Table 1. *Demographic Profile of the Respondents (N = 76)*

Profile Variable	Category	f	%
Sex	Male	43	56.58
Sex	Female	33	43.42
Household size	1-3 members	6	7.90
Household size	4-5 members	35	46.05
Household size	6 members or more	35	46.05
Family monthly income	₱10,000 or less	57	75.00
Family monthly income	₱10,957-₱21,914	19	25.00
Family monthly income	More than ₱21,914	0	0.00
Means of livelihood	Farm labor-related work	25	32.89
Means of livelihood	Construction work	12	15.79
Means of livelihood	Government employment	10	13.16
Means of livelihood	Other sources	10	13.16
Means of livelihood	Fishing	9	11.84
Means of livelihood	Micro-enterprise	6	7.89
Means of livelihood	Transportation services	4	5.26

Extent of Implementation Challenges

Students experienced RFS implementation challenges to a high extent overall ($M = 3.63$, $SD = 0.29$). The highest-rated concern was the need to sustain operational costs for demonstration farms and modern equipment ($M = 3.70$, $SD = 0.46$). The shortage of qualified agricultural educators followed closely ($M = 3.67$, $SD = 0.50$). Social perceptions also remained important: respondents reported that communities may regard RFS as secondary to conventional academic schools and that some students may perceive farm schools as less prestigious ($M = 3.66$, $SD = 0.53$).

Table 2. *Selected Challenges in the Implementation of the Rural Farm School*

Challenge Indicator	M	SD	Interpretation
Sustaining operational costs for demonstration farms and modern equipment	3.70	0.46	High extent
Shortage of qualified agricultural educators with technical and pedagogical skills	3.67	0.50	High extent
Community perception that RFS is secondary to conventional academic schools	3.66	0.53	High extent
Student perception that farm schools are less prestigious than mainstream schools	3.66	0.53	High extent
Insufficient budget for infrastructure, tools, and farm inputs	3.64	0.48	High extent
Lack of facilities such as irrigation systems, greenhouses, and storage areas	3.63	0.49	High extent
Limited teacher exposure to modern farming practices	3.61	0.52	High extent
Weak collaboration among schools, farmers, LGUs, and private partners	3.55	0.50	High extent
Lack of clear monitoring and evaluation systems	3.54	0.60	High extent
Overall	3.63	0.29	High extent

The pattern shows that RFS sustainability requires more than curriculum adoption. It depends on recurrent financing, human-resource development, adequate facilities, and external support. These findings are consistent with UNESCO's (2020) emphasis on sustained educational resources and FAO's (2020) focus on strengthening agricultural education and rural-youth opportunities. Informal interview responses in the source manuscript also indicated that some community members and parents did not regard farm-based schooling as equal in value to conventional academic education, which may affect enrollment, support, and program expansion.

Opportunities Generated by the Rural Farm School

Although the source manuscript did not provide an item-level opportunity table, it consistently identified several benefits experienced through RFS participation. Students gained exposure to sustainable farming, practical agricultural knowledge, entrepreneurial learning, experiential activities, and community-linked education. These opportunities remain relevant even when implementation challenges persist.

Table 3. *Opportunities Identified in the Rural Farm School Program*

Opportunity Area	Contribution to Students and the Program
Sustainable farming awareness	Introduces students to environmentally responsive and locally relevant farming practices.
Practical agricultural knowledge	Provides hands-on exposure to crop production, tools, farm processes, and demonstration activities.
Entrepreneurial skills	Encourages students to connect agricultural activities with livelihood, enterprise, and income opportunities.
Experiential learning	Links classroom concepts with authentic tasks and community-based practice.
Community engagement	Creates opportunities for collaboration with local farmers, LGUs, families, and private partners.
Rural development orientation	Positions education as a pathway for strengthening local livelihoods and agricultural resilience.

Relationship Between Challenges and Opportunities

The detailed Results section reported a Pearson correlation of $r = .20$ with $p = .089$. This indicates a weak positive relationship that was not statistically significant at the .05 level. The result suggests that implementation constraints did not necessarily prevent students from recognizing educational and livelihood-related opportunities within the RFS program.

Table 4. *Relationship Between Challenges and Opportunities*

Variables	r	p	Interpretation	Decision
Challenges and opportunities in RFS implementation	.20	.089	Weak positive relationship	Not significant

Differences in Challenges Across Profile Variables

The source manuscript reported no significant differences in the extent of challenges according to sex, family income, and livelihood source. However, a significant difference was reported according to household size, $F(2, 73) = 96.02$, $p = 3.6 \times 10^{-21}$. This finding indicates that household size may be associated with different perceptions of RFS implementation constraints, although the magnitude and computation should be checked against the original statistical output because the abstract reported a conflicting summary.

Table 5. *Reported Differences in the Extent of Challenges Across Profile Variables*

Grouping Variable	Reported Test Result	Interpretation
Sex	No significant difference reported	Challenges were similarly experienced across sex groups.
Family monthly income	No significant difference reported	Challenges were similarly experienced across income groups.
Means of livelihood	No significant difference reported	Challenges were similarly experienced across livelihood groups.
Household size	$F(2, 73) = 96.02, p = 3.6 \times 10^{-21}$	Significant difference reported; verify against original statistical output.

Strategic Action Plan

The findings support an action plan that addresses the resource, instructional, partnership, and perception-related constraints identified by the respondents. The proposed priorities are presented below.

Table 6. *Proposed Strategic Action Plan for Strengthening Rural Farm School Implementation*

Priority Area	Key Activities	Responsible Stakeholders	Expected Output
Resource mobilization	Prepare an annual resource plan; seek LGU, agriculture-office, alumni, and private-sector support; prioritize tools, inputs, and demonstration-farm maintenance.	School head, RFS coordinator, LGU, partners	Improved access to operational funds, farm inputs, and essential equipment.
Teacher capability-building	Conduct training on modern farming practices, climate-smart agriculture, farm entrepreneurship, and skills-based instruction.	School head, agriculture teachers, DepEd, agriculture agencies	Teachers with strengthened technical and pedagogical competence.
Facilities improvement	Develop a phased improvement plan for irrigation, storage areas, greenhouse facilities, and equipment maintenance.	School, LGU, partners	More functional and sustainable practical-learning facilities.
Community partnership	Formalize partnerships with farmers, cooperatives, LGUs, and private organizations for mentoring, resource sharing, and learning visits.	School, parents, farmers, LGU, private sector	Expanded technical support and stronger community ownership.
Program advocacy	Conduct orientation sessions, showcases, and student demonstrations to explain the value of RFS education and agricultural careers.	School head, teachers, students, parents	Improved awareness, perception, and support for the RFS program.
Monitoring and evaluation	Use semester-based monitoring tools to track participation, facilities, skills development, partnership outputs, and student feedback.	School head, RFS team, stakeholders	Regular monitoring reports and evidence-based program improvement.

CONCLUSION

The Rural Farm School program at Mahinog National High School provides meaningful opportunities for practical agricultural learning, sustainable-farming awareness, entrepreneurship, and community-oriented education. However, the program is implemented within a resource-constrained rural context. Students reported challenges to a high extent, particularly in relation to operating costs, equipment, qualified educators, facilities, partnerships, monitoring systems, and public perception. The reported relationship between challenges and opportunities was weak and not statistically significant, indicating that program benefits may remain visible even when implementation difficulties persist. Strengthening the program requires coordinated investments in resources, teacher development, facilities, stakeholder partnerships, advocacy, and systematic monitoring.

Recommendations

Mahinog National High School and its partners should develop an annual resource-mobilization plan for demonstration farms, tools, facilities, and agricultural inputs. DepEd, local government units, agriculture agencies, and partner institutions should support continuous capability-building for RFS teachers, particularly in modern, climate-responsive, and entrepreneurial farming approaches. The school should strengthen partnerships with farmers, cooperatives, families, and private organizations to expand mentoring, resource sharing, and authentic learning experiences. Program advocacy should be intensified to improve the social perception of farm-based education and communicate its relevance to rural development. A structured monitoring and evaluation system should be implemented each semester. Before journal submission, the original statistical output should also be reviewed to reconcile the conflicting statements in the source manuscript regarding the correlation result and the reported household-size comparison.

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