A Feasibility Study on Establishing a TVL Track with Agri-Fisheries Strand in the Senior High School Program of Milbuk National High School

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ABSTRACT

The proposed establishment of the Agri-Fisheries strand within the Technical-Vocational-Livelihood (TVL) Track at Milbuk National High School (MNHS) would address the critical educational and economic needs of communities reliant on farming and fishing. This initiative aligns with national and international goals for Technical-Vocational Education and Training (TVET), aiming to enhance employability and support local industry through practical and technical training.

Despite the recognized need for specialized vocational programs in agriculture and fisheries, there is limited localized research on the feasibility of implementing such a strand at MNHS. Specifically, gaps exist in understanding community readiness, resource availability, stakeholder support, and financial sustainability for this program in the context of Barangay Milbuk.

Thus, this study aimed to evaluate the feasibility of establishing the Agri-Fisheries strand at MNHS by assessing environmental, market, technical, management, financial, and socio-cultural factors to determine the program's viability and potential impact on students and the community.

This research employed a mixed-methods approach involving, surveys, and interviews with key stakeholders, including parents, fisherfolks, farmers, educators, and local government unit (LGU) representatives. This comprehensive data collection sought to gauge community support, students' interest, infrastructural readiness, and financial sustenance for the proposed strand.

Findings revealed that community has a strong support and significant student interest, particularly among children of farmers and fisherfolks, were identified. Existing infrastructure challenges pose potential barriers to program implementation. Technological, physical, and collaborative resources are growing, providing a solid foundation for hands-on, industry-relevant education. Financial feasibility is promising, with potential funding from LGU partnerships and community contributions ensuring sustainability. The program is ethically sound and culturally appropriate, promoting inclusivity, gender equity, and community participation.

The findings suggest that the Agri-Fisheries strand at MNHS is a practical and sustainable initiative that can empower learners with job-ready skills while supporting local economic development. Collaborative financing and stakeholder engagement are crucial for overcoming infrastructural challenges and ensuring long-term program success. This initiative can serve as a model for integrating traditional livelihood practices with modern technical education, fostering socio-economic resilience in rural communities.

Keywords: Agri-Fisheries, Learners, Milbuk National High School

INTRODUCTION/RATIONA

The Senior High School (SHS) program under the K to 12 curriculum aims to prepare Filipino students for employment, entrepreneurship, or further studies. The Technical-Vocational-Livelihood (TVL) track, particularly its Agri-Fisheries strand, offers practical training in agriculture and aquaculture-sectors vital to rural livelihoods and national food security.

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Milbuk National High School (MNHS) serves a community in Barangay Milbuk, Palimbang, Sultan Kudarat, where most families rely on farming and fishing. Despite this, MNHS lacks a Senior High School strand tailored to these local strengths, limiting students' access to relevant skills and employment opportunities within their community.

Recognizing this gap, teachers, parents, and community leaders expressed strong support for introducing the Agri-Fisheries strand. This feasibility study evaluates student needs, available resources, institutional readiness, and community backing for the program. Its goal is to align education with local realities, equipping students with practical skills that empower them to contribute to their community's development and economic sustainability-enabling them to thrive without leaving their hometown.

Legal Bases

The introduction of the Agri-Fisheries strand within Milbuk National High School's (MNHS) Senior High School curriculum is grounded in multiple Philippine laws and policies that emphasize the integration of technical-vocational education into basic education.

Republic Act No. 10533 (Enhanced Basic Education Act of 2013) mandates the K to 12 curriculum, requiring senior high school tracks that prepare students for employment, entrepreneurship, or higher education. It specifically highlights the importance of contextualized subjects such as agriculture and fisheries, especially in rural and coastal areas.

Republic Act No. 8435 (Agriculture and Fisheries Modernization Act of 1997) promotes the advancement of agricultural and fisheries education to improve the livelihoods of farmers and fisherfolk through technology and innovation.

Republic Act No. 7796 (Technical Education and Skills Development Act of 1994) directs TESDA to provide quality technical education aligned with industry needs, ensuring the development of skilled middle-level manpower.

Further, the Philippine Development Plan and DepEd Order No. 41, s. 2015 emphasize the alignment of TVL strands with local economic demands, labor market needs, and community strengths.

Together, these frameworks justify the establishment of the Agri-Fisheries strand at MNHS as a strategic, practical, and socially responsive program that addresses both educational and local economic development goals in Palimbang.

Significance of the study

This study is significant to multiple stakeholders who will be involved in the proposed program on establishing an Agri-Fisheries strand under MNHS's Senior High School TVL track.

For school administrators, the prosed program will provide guidance for planning and implementing a curriculum that aligns with educational standards and local economic needs, supporting informed decisions on resources, infrastructure, and partnerships to ensure program sustainability.

For teachers and faculty, it will promote delivering contextualized education that prepares students for practical work in agriculture and fisheries, encouraging professional development and industry-aligned teaching.

For parents and community stakeholders, the proposed program will assure that education is relevant and practical, enhancing students' futures and local economic growth while strengthening school-community collaboration.

For students, the program will offer valuable technical skills applicable to employment or further education, empowering them to contribute to sustainable local development.

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For researchers, it will add to the literature on community-driven education models and serves as a reference for similar initiatives linking education with rural economic development.

Objectives of the Study

The following are the objectives of this study:

1. The Market Study: Educational Needs and Market Analysis
    - determine the demand for a TVL track with an Agri-Fisheries strand among students in MNHS.
2. The Technical Study: Strategic Planning and Sustainability
    - assess the resources and infrastructure required to sustainably implement the Agri-Fisheries strand, ensuring alignment with industry standards and DepEd guidelines.
3. The Management Study: Risk Assessments and Mitigation Strategy
    - identify potential risks associated with the implementation of the TVL track, such as lack of equipment or qualified personnel; and
    - develop strategies to mitigate these risks, ensuring smooth operation and program success.
4. The Financial Study: Financial Projection and Cost-Benefit Analysis
    - project the financial costs and benefits of establishing the Agri-Fisheries strand.
5. The Socio-Economic Study: Ethical-Socio-Cultural Considerations
    - evaluate the potential socio-economic impacts of the Agri-Fisheries strand on the community; and
    - promoting ethical and sustainable practices in agriculture and fisheries that respected local traditions and values.
6. On the Decision to Establish a TVL Track with Agri-Fisheries Strand:
    - determine whether establishing the Agri-Fisheries strand aligned with the mission and vision of MNHS.

METHODOLOGY

This chapter outlines the study's data gathering procedure, research locale, and instruments used.

Study Design

A mixed-methods approach was employed, combining quantitative and qualitative surveys, and Key Informant Interviews (KIIs) to assess the demand, significance, and potential impact of the proposed Agri-Fisheries Strand Program. Quantitative surveys measured student interest and preferences, while KIIs provided deeper insights from students, fisherfolks and farmer parents, teachers, and local officials (Merriam & Tisdell, 2020). This integration of statistical data and stakeholder perspectives enabled a comprehensive understanding of how the program aligns with local educational and employment needs (Tashakkori & Teddlie, 2021).

Data Gathering Procedure

Prior to data collection, the researchers secured academic approval, validated instruments, and obtained permission from MNHS. Using a descriptive design, data were collected via paper surveys from 50 students

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and KIIs with 30 parents, 21 teachers/administrators, and 10 government and DepEd officials. Student surveys focused on interest and perceived benefits, while interviews explored stakeholder views on implementation and challenges.

This mixed-methods approach yielded rich, multi-faceted insights, revealing strong community support and practical considerations that affirm the feasibility and potential positive impact of the Agri-Fisheries strand.

Local of the Study

This study was conducted at Milbuk National High School (MNHS), a public school in Barangay Milbuk, Palimbang, Sultan Kudarat, serving nearly 1,500 junior and senior high students. Most come from families dependent on farming, fishing, or small businesses in a coastal, agricultural community facing economic challenges and limited job opportunities beyond these sectors.

MNHS plays a crucial role in providing students with pathways to improved futures. While centered on the school, the research also incorporated insights from parents, farmers, fisherfolk, teachers, and local leaders from nearby barangays. Their perspectives enriched the understanding of how the proposed Agri-Fisheries strand could benefit both MNHS and the broader Palimbang community.

Selecting MNHS was strategic, given its location and economic context align with the strand's objectives. Including surrounding barangays ensured the study reflected the genuine needs and aspirations of the community it intends to serve.

Respondents and Informants

Key Informant Interviews (KIIs) for the other stakeholders, allowing for both quantitative and qualitative insights. Below is the table showing the distribution of the respondents for the survey.

Table 1. Distribution of Respondents

Category	Number of Respondents
Students	50
Parents and Guardians	30
Teachers and School Administrators	21
DepEd Officials and LGU Representative	10
Total	111

The researchers gathered feedback from a diverse group closely connected to MNHS and the local community. Fifty Grade 10 students-about 25% of the cohort-were surveyed using closed-ended questions to assess their interest, expectations, and perceptions of the proposed Agri-Fisheries strand. These students were chosen for their imminent transition to Senior High School, making their insights particularly relevant.

Beyond students, Key Informant Interviews (KIIs) were conducted with 30 parents/guardians, 21 teachers and administrators, and 10 officials from DepEd and local government. Each group offered unique perspectives: parents shared aspirations for their children, educators discussed program integration, farmers contributed practical agricultural knowledge, and officials addressed policy and funding considerations.

Participants were purposefully selected based on their roles and connections to the school and community. Student data were collected via paper surveys to ensure inclusivity, while stakeholders participated in open-ended interviews to provide detailed qualitative insights.

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This mixed-methods approach combined quantitative student data with qualitative stakeholder feedback, enabling a comprehensive understanding of community interest and readiness. By incorporating voices from those most affected, the study aimed to design a program aligned with genuine needs and opportunities, increasing its likelihood of success.

Sampling Technique

This study employed purposive sampling to deliberately select participants with the most relevant experiences and insights regarding the proposed Agri-Fisheries strand. Rather than random selection, the researchers targeted individuals whose perspectives were critical to shaping the initiative.

Fifty Grade 10 students were chosen from a total of 198, as they were about to enter Senior High School and would be directly affected by the new strand. Teachers and school administrators were included for their roles in curriculum development and student support. Local farmers and fisherfolk were consulted to provide practical insights on how the strand could benefit both students and community sustainability. Additionally, representatives from DepEd and local government offered institutional and policy-level perspectives.

While purposive sampling risks excluding alternative viewpoints, the researchers mitigated this by including participants from multiple barangays and diverse community roles. This approach ensured the data collected was rich, relevant, and grounded in the lived experiences of those most impacted.

Instrument

The study utilized two primary data collection tools: a structured questionnaire for Grade 10 students and a Key Informant Interview (KII) guide for teachers, parents, local farmers, DepEd officials, and local government representatives.

The structured questionnaire gathered quantitative data on students' interests, awareness of Agri-Fisheries careers, readiness to pursue the strand, and factors influencing their educational choices such as family background and perceived job prospects. It was designed in simple, student-friendly language to ensure ease of understanding and completion.

Before final deployment, the questionnaire was pilot-tested on a small group of Grade 10 students outside the study sample. Feedback from this pilot led to minor revisions for clarity and coherence. Additionally, education professionals and research experts reviewed the instrument to validate its content and ensure reliability, confirming its alignment with the study's objectives.

PRESENTAION OF RESULTS AND DISCUSSION

Results

Market Study: Educational Needs and Market Analysis

The proposal to establish the Agri-Fisheries strand at MNHS responds to the educational needs and economic realities of Palimbang, Sultan Kudarat. The study revealed a strong link between the community's reliance on agriculture and fisheries and the demand from students and parents for formal education supporting these sectors. Many students come from farming and fishing families eager to enhance traditional practices through modern training.

Introducing the Agri-Fisheries strand addresses a clear, practical educational gap by aligning curriculum with local livelihoods. Such context-sensitive programs not only prepare students for employment but also promote sustainable community development. As Padilla (2020) emphasizes, education tailored to local contexts fosters meaningful community progress, while UNESCO (2015) notes that TVET aligned with local economies improves employability and inclusive growth.

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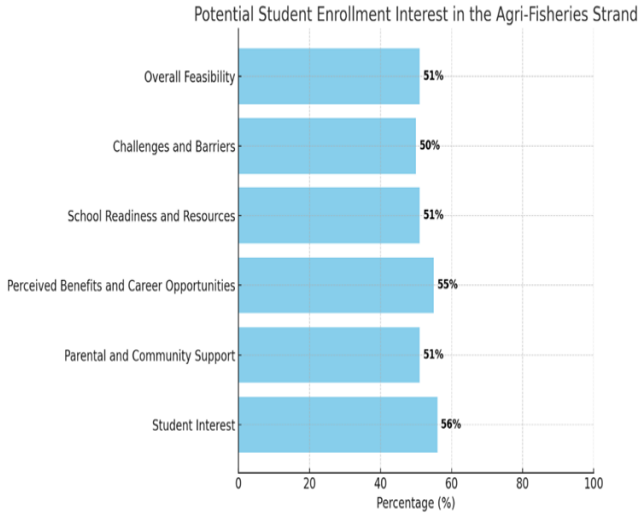

Figure 1: Factors Influencing Students Enrollment in Agri-fisheries Strand

The data presented in Figure 1 highlights the key factors influencing potential student enrollment in the Agri-Fisheries strand at MNHS. Student interest is notably high, with 56% of respondents expressing willingness to enroll, indicating a strong foundation for program uptake. Perceived benefits and career opportunities are also recognized by 55% of respondents, suggesting that students see clear value and future prospects in pursuing this strand. Parental and community support, along with perceptions of school readiness and resources, are both at 51%, reflecting moderate but crucial stakeholder backing and a cautiously optimistic view of the school's capacity to deliver the program. Overall feasibility is similarly rated at 51%, while 50% of respondents acknowledge existing challenges and barriers, underscoring the need for targeted interventions to address potential obstacles (see Figure 1). These findings are consistent with prior research emphasizing that aligning educational programs with local economic needs and stakeholder expectations enhances both student engagement and community support (Padilla, 2020; UNESCO, 2015). The relatively narrow range of responses across all factors suggests a consensus among stakeholders, with strong student motivation and perceived benefits driving interest, while moderate support and recognized barriers highlight areas for further development and engagement.

Table 2: Stakeholder Feedback on the Establishment of Agri-Fisheries Strand

Category	Findings	Remarks
Identified Challenges	50% of respondents cited financial, transportation, and environmental concerns	Seen as potential barriers to enrollment
Overall Sentiment	51% agreed the program was a good decision	Perceived as sustainable and aligned with DepEd goals
Willingness to Recommend	51% would recommend the program to others	Indicates belief in success and long-term benefits
Parental Support	98% parents likely to encourage enrollment	Cited relevance to farming and fishing livelihoods

Table 2 summarizes key findings regarding the feasibility and community support for the Agri-Fisheries strand. Half of the respondents (50%) identified financial, transportation, and environmental issues as potential barriers to enrollment. Despite these challenges, a slight majority (51%) viewed the program positively, considering it a sustainable initiative aligned with DepEd's goals. Similarly, 51% expressed willingness to recommend the program, reflecting confidence in its success and long-term benefits. Notably, parental support was overwhelmingly strong, with 98% of parents likely to encourage their children's enrollment, emphasizing the program's relevance to local farming and fishing livelihoods. One parent respondent stated:

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"Buot nakong ingganyuhon ang akong anak nga mag-enroll sa Agri-Fisheries kay kini angay sa among panginabuhi." FSRP1-01

This reflected a high degree of cultural and practical alignment between the strand and the community's core economic activities. However, a small minority (2/30 raised concerns, preferring other strands that they believed offered more job security. One such respondent mentioned,

"Mas ganahan ko nga laing strand ang pilion sa akong anak nga daghan ug kasiguruhan sa trabaho." FSRP2 -01

This indicated a difficulty in convincing certain parents that the Agri-Fisheries strand could offer equivalent career security compared to other educational pathways. A large number of participants (28 out of 30) emphasized the practical, community-oriented skills their children would acquire through the Agri-Fisheries strand, highlighting the importance of hands-on, localized education. One participant remarked,

"Makakat-on ang akong anak ug praktikal nga kahanas nga bililhon sa among komunidad." FSRP1-03

Conversely, a small number of participants (2 out of 30) raised apprehensions regarding the competitiveness of the skills obtained in this strand, especially when compared to other strands that may provide wider job prospects. One participant stated:

"Nagkabalaka ko nga basin dili makahatag ang Agri-Fisheries kompetitibong kahanas sa mas daghan nga oportunidad sa trabaho." FSRP2- 04

This underscored the necessity of tackling possible deficiencies in skill development to ensure students are prepared to compete in the wider job market. A majority of parents (26 out of 30) felt that Agri-Fisheries education could lead to lasting job prospects, especially in agriculture and fisheries. One individual noted:

"Oo, makahatag kini ug mga oportunidad sa pagnegosyo sa agrikultura og pangisda." FSRP1-02

This indicated a robust belief in the entrepreneurial possibilities within the strand. Nonetheless, a minority raised concerns regarding the adequacy of local job prospects in this sector. One participant mentioned,

"Duda ako kung may sapat na lokal na oportunidad sa trabaho sa larangang ito." FSRP1-10

This issue could hinder the complete adoption of the strand and may necessitate initiatives to improve partnerships with local industries and create job opportunities. Most respondents expressed their trust in the school to deliver adequate safety training for fieldwork, reflecting confidence in the institution's ability to safeguard student health. One respondent mentioned,

"Salig ko nga maghatag ang eskwelahan ug husto nga mga panudlo kaluwasan sa fieldwork." FSRP1-05

However, five participants expressed worries regarding the physical dangers associated with farming and fishing practices, with one individual noting:

"Nagkabalaka ko sa mga pisikal nga peligro nga kauban sa mga aktibidad sa pag-uma ug pangingisda." FSRP2-09

This highlighted the importance of established safety procedures and orientations to reduce these hazards. Every participant indicated a readiness to assist their children with hands-on experiences like farm excursions and on-the-job training (OJT). One participant noted:

"Oo, malipay ko nga suportahan ang akong anak sa mga aktibidad sa pag-uma ug pangisda." FSRP2-0

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Parental involvement in the Agri-Fisheries strand was notably strong, with parents viewing the program as practical and aligned with the community's livelihood values. This relevance fostered positive reception and laid a solid foundation for successful implementation and sustainability. However, concerns about job security, skill competitiveness, and fieldwork safety were raised. Literature supports these issues, highlighting that neglecting worker safety and skill alignment can hinder participation and program longevity (Creswell; Brown & Duguid). Scholars like Watts and Simpson & Weiner emphasize the need for clear safety protocols, while Chambers stresses that creating local job opportunities enhances sustainability by empowering communities economically and socially. Addressing these factors is essential to ensure the strand's long-term success.

Sustainability and Support Systems

In terms of sustainability, 21 respondents highlighted the significance of forging robust collaborations with local government units (LGUs), non-governmental organizations (NGOs), and local farmers to offer training, resources, and practical experiences for students. One participant remarked, "By collaborating with LGUs, NGOs, and local farmers to deliver training and resources." *FSRT1*-05 These collaborations were viewed as essential for the ongoing support and success of the program. Nonetheless, worries regarding the long-term sustainability of the strand were also expressed, with many stressing the necessity of strategic planning and enduring funding. As one participant warned, "Without a long-term plan or funding, the program may not endure." *FSRT1*-20

Prosed Sustainability Strategies for the Agri-Fisheries Strand

To strengthen the Agri-Fisheries program at MNHS, a comprehensive strategy rooted in community involvement is essential. Formal partnerships with local government units and NGOs can secure resources and enhance engagement, aligning with research on collaborative governance in rural education (Anderson & Gough, 2020). Collaborations with local farms and fisheries provide students with practical, industry-relevant learning experiences (Kolb, 1984). Income-generating projects like fishponds and gardens offer both financial support and hands-on training. Securing funding from government and private grants (e.g., DepEd, DA, BFAR, TESDA) is crucial for sustainability, reflecting successes in similar rural programs (FAO, 2017). Ongoing teacher training and specialist recruitment improve instructional quality in this evolving sector. Regular curriculum reviews with industry input ensure relevance and future readiness. Community advocacy and showcasing student work build trust and enthusiasm. Ultimately, a strategic plan with clear goals, sustainability indicators, and monitoring will foster program growth, student development, and a stronger local economy based on agriculture and fisheries.

Feasibility of the Agri-Fisheries Strand:

The vast majority of those surveyed demonstrated strong backing for the Agri-Fisheries strand, underlining its importance to contemporary agricultural and fisheries methods. Numerous individuals pointed out that providing students with knowledge of current techniques would assist them in adjusting to changing livelihoods. As one parent remarked:

"*Kinahanglan makat-on ang mga estudyante sa modernong paagi sapagpanguma ug pagpangisda*." *FSRP1-07*

Nonetheless, a handful of participants expressed worries regarding student involvement, concerned that a lack of motivation and appropriate structure might hinder the program from reaching its desired goals. As one respondent noted:

"*Basin dili nila kini seryosohon ug usik-usik lang sa training*." *FSRP2-08*

This highlighted the importance of implementing strategies that foster student motivation and engagement for the program to thrive. A majority of the participants indicated their readiness to partner with the school, providing training areas on farms or fishing sites and guiding students during hands-on activities. One participant confirmed:

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"*Oo, andam ko nga tugotan ang mga estudyante nga moanhi ug motudlo ko nila og basic skills*." *FSRP1-09*

The robust support from the community played a vital role in providing hands-on training and experiential learning. Nonetheless, a few respondents pointed out practical difficulties like insufficient time, resources, and equipment, which may have hindered their complete involvement. One participant observed:

"*Wala koy igong oras ug gamit para motudlo sa mga estudyante*" *FSRP1-20*

This indicated that although community backing was robust, extra resources and help were needed to encourage participation.

Implementation Challenges in the Local Setting:

Participants highlighted the significance of equipping students to handle practical challenges like climate changes, pest management, and varying prices, which are typical in agriculture and fishing. One participant noted:

"*Kinahanglan makat-on sila kung unsaon pag-atubang sa klima, peste, ug kalit-kalit nga presyo*." *FSRP2-11*

Incorporating these practical matters into the curriculum was vital to maintain the relevancy of the strand. Furthermore, a few respondents (7 out of 30) voiced worries regarding the complexity and challenges of the agricultural and fisheries sectors, worrying that these difficulties might deter students from considering these fields in the long run. One participant remarked:

"*Lisod na kaayo ang mga hagit ug basin mawala ang interes sa mga estudyante*." *FSRP2-15*

Enhancing student motivation and retention is crucial, especially given the unique challenges in agriculture and fisheries. Respondents recognize real-world issues like climate variability, pest infestations, and market fluctuations that impact livelihoods and student engagement. Most emphasize the need for practical, context-relevant education that builds not only technical skills but also resilience, motivation, and a growth mindset. Research by Ryan and Deci (2000) highlights intrinsic motivation-when students find personal meaning in learning-as key to persistence in difficult fields. Retention can be supported through mentorship, peer networks, and recognition of achievements. Curricula should integrate topics like climate adaptation, market trends, and pest control using local case studies, while mentoring and counseling systems can help students navigate challenges and stay motivated.

Perceived Benefits and Long-Term Sustainability:

In relation to Recognized Advantages and Ongoing Sustainability, a significant number of participants acknowledged the necessity for skilled youth to ensure the enduring viability of the agriculture and fisheries industries in the future. One individual remarked:

"Oo, kinahanglan namo ang mga batan-on nga kabalo sa pagpauswag sa uma ug panagat." FSRP2 - 18

The program is a crucial measure in revitalizing these industries. Nonetheless, a few individuals voiced doubts regarding traditional education, contending that practical experience holds greater significance than learning in a classroom setting. One participant commented:

"Kasagaran namo nagbase ra sa kasinatian, dili sa eskwela." FSRP2-15

Achieving a balance between hands-on experience and formal education was essential for students to acquire applicable skills while honoring traditional wisdom. Numerous respondents regarded the Agri-Fisheries strand

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as a reciprocal learning experience, enabling both students and community members to share insights and potentially provide job opportunities. One respondent recounted:

"*Makakat-on sab mi og bagong pamaagi gikan sa mga estudyante ug basin among kuhaon sila sa trabaho.*" *FSRP2-16*

The possibility of mutual learning and job opportunities enhanced the community's support for the initiative. Nevertheless, six participants emphasized the importance of having a well-defined framework for community participation to guarantee that all stakeholders gained from it, with one individual observing:

"*Kung walang malinaw na programa para sa komunidad, baka wala kaming mapala*." *FSRP2-15*

The strong community support for the Agri-Fisheries program at Milbuk National High School reflects a shared commitment to sustaining and revitalizing local agriculture and fisheries. While many see the program as vital for future livelihoods, some emphasize the importance of hands-on experience alongside classroom learning. This highlights the need for a curriculum that blends traditional knowledge with formal education, valuing both community skills and modern practices. Arnold and Fernandez-Gimenez (2007) affirm that integrating local knowledge enhances educational relevance and preserves cultural heritage. Effective implementation requires structured community involvement through co-developed learning modules, mentorship programs, and mutual learning opportunities. By fostering reciprocal relationships and respect, the strand can become a collaborative space for knowledge exchange and innovation. As Freire (1970) emphasized, education should be a dialogic process rooted in local context and shared goals, making the Agri-Fisheries strand a true platform for community development and intergenerational learning.

On Technical Study: Proposed Organizational Chart Teaching and Non-Teaching Staff for the Proposed Agri Fisheries Program

Among the 64 educators at MNHS, only those who are qualified will be chosen to participate in the Agri Fisheries Program. Selection will be based on their professional expertise, training, and their contributions since they began working in the department. Below is the organizational chart for the Agri Fisheries Program.

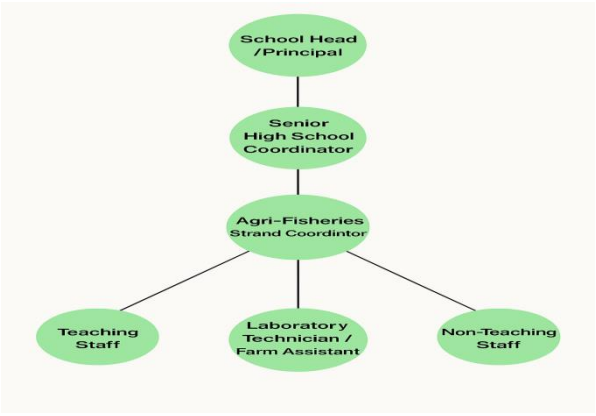

Figure 3: Proposed Organizational chart of Teaching and Non-teaching Staff for the proposed Agri-fisheries strand

The proposed Agri-Fisheries Program at MNHS aims to provide students with practical, hands-on learning through existing resources like computer units, laboratories, and agricultural land. Enhancements such as tablets with agriculture and fisheries software, reliable internet, and mobile apps will further support learning. While the school lacks a dedicated fisheries lab, its science lab offers essential soil and water testing tools. Local partners are expected to contribute facilities like fishponds and aquaculture tanks, alongside greenhouses or outdoor farming areas and storage for equipment. This foundational infrastructure, combined with experiential learning, has been shown to significantly improve students' skills and employability in agriculture and fisheries (Adebayo, 2019; Olson & Samuels, 2020). Supported by local collaborations, these resources will foster valuable learning opportunities and ensure the program's sustainability and success.

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Proposed Class Schedules for the Proposed Agri-Fisheries Program

Proposed class schedule for the Agri-Fisheries program at MNHS for Grades 11 and 12, presented in a table format. The schedule was designed to provide a comprehensive learning experience, blending academic subjects with practical, hands-on skills to prepare students for careers in agriculture and fisheries.

Table 3: Proposed Class Schedule for Agri-Fisheries Program (Grade 11)

Ist Semester S.Y. 2026-2027					
Time	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
7:30 AM - 8:30 AM	Oral Communication	Oral Communication	Oral Communication	Oral Communication	Oral Communication
8:30 AM - 9:30 AM	Reading and Writing	Reading and Writing	Reading and Writing	Reading and Writing	Reading and Writing
9:30 AM - 9:45 AM	Recess	Recess	Recess	Recess	Recess
9:45 AM - 10:45 AM	Komunikasyon at Pananaliksik sa Wika at Kulturang Filipino	Komunikasyon at Pananaliksik sa Wika at Kulturang Filipino	Komunikasyon at Pananaliksik sa Wika at Kulturang Filipino	Komunikasyon at Pananaliksik sa Wika at Kulturang Filipino	Komunikasyon at Pananaliksik sa Wika at Kulturang Filipino
10:45 AM - 11:45 AM	Pagbasa at Pagsusuri ng iba't ibang Teksto tungo sa Pananaliksik	Pagbasa at Pagsusuri ng iba't ibang Teksto tungo sa Pananaliksik	Pagbasa at Pagsusuri ng iba't ibang Teksto tungo sa Pananaliksik	Pagbasa at Pagsusuri ng iba't ibang Teksto tungo sa Pananaliksik	Pagbasa at Pagsusuri ng iba't ibang Teksto tungo sa Pananaliksik
11:45 AM - 12:30 AM	Lunch	Lunch	Lunch	Lunch	Lunch
12:30 PM - 1:30 PM	21st Century Literature from the Philippines and the World	22nd Century Literature from the Philippines and the World	23rd Century Literature from the Philippines and the World	24th Century Literature from the Philippines and the World	25th Century Literature from the Philippines and the World
1:30 PM - 2:30 PM	Contemporary Philippine Arts from the Region	Contemporary Philippine Arts from the Region	Contemporary Philippine Arts from the Region	Contemporary Philippine Arts from the Region	Contemporary Philippine Arts from the Region
2:30 PM - 2:45 PM	Recess	Recess	Recess	Recess	Recess
2:45 PM - 3:45 PM	Media and Information Literacy	Media and Information Literacy	Media and Information Literacy	Media and Information Literacy	Media and Information Literacy
3:45 PM - 4:45 PM	General Mathematics	General Mathematics	General Mathematics	General Mathematics	General Mathematics

2nd Semester S.Y. 2026-2027					
Time	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
7:30 AM - 8:30 AM	Statistics and Probability	Statistics and Probability	Statistics and Probability	Statistics and Probability	Statistics and Probability
8:30 AM - 9:30 AM	Earth and Life Science	Earth and Life Science	Earth and Life Science	Earth and Life Science	Earth and Life Science
9:30 AM - 9:45 AM	Recess	Recess	Recess	Recess	Recess
9:45 AM - 10:45 AM	Physical Science	Physical Science	Physical Science	Physical Science	Physical Science
10:45 AM - 11:45 AM	Introduction to Philosophy of Human Person	Introduction to Philosophy of Human Person	Introduction to Philosophy of Human Person	Introduction to Philosophy of Human Person	Introduction to Philosophy of Human Person
11:45 AM - 12:30 AM	Lunch	Lunch	Lunch	Lunch	Lunch
12:30 PM - 1:30 PM	Personality Development	Personality Development	Personality Development	Personality Development	Personality Development
1:30 PM - 2:30 PM	Physical Education and Health	Physical Education and Health	Physical Education and Health	Physical Education and Health	Physical Education and Health
2:30 PM - 2:45 PM	Recess	Recess	Recess	Recess	Recess
2:45 PM - 3:45 PM	Practical Research 1	Practical Research 1	Practical Research 1	Practical Research 1	Practical Research 1
3:45 PM - 4:45 PM	Understanding Culture, Society and Politics	Understanding Culture, Society and Politics	Understanding Culture, Society and Politics	Understanding Culture, Society and Politics	Understanding Culture, Society and Politics

Grade 12

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Ist Semester S.Y. 2027-2028					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
7:30 AM - 8:30 AM	English for Academic and Professional Purposes	English for Academic and Professional Purposes	English for Academic and Professional Purposes	English for Academic and Professional Purposes	English for Academic and Professional Purposes
8:30 AM - 9:30 AM	Practical Research 2	Practical Research 3	Practical Research 4	Practical Research 5	Practical Research 6
9:30 AM - 9:45 AM	Recess	Recess	Recess	Recess	Recess
9:45 AM - 10:45 AM	Filipino sa Piling Larangan	Filipino sa Piling Larangan	Filipino sa Piling Larangan	Filipino sa Piling Larangan	Filipino sa Piling Larangan
10:45 AM - 11:45 AM	Agricultural Crop Production NC1	Agricultural Crop Production NC2	Agricultural Crop Production NC3	Agricultural Crop Production NC4	Agricultural Crop Production NC5
11:45 AM - 12:30 AM	Lunch	Lunch	Lunch	Lunch	Lunch
12:30 PM - 1:30 PM	Agricultural Crop Production NCII	Agricultural Crop Production NCII	Agricultural Crop Production NCII	Agricultural Crop Production NCII	Agricultural Crop Production NCII
1:30 PM - 2:30 PM	Agricultural Crop Production NCII	Agricultural Crop Production NCII	Agricultural Crop Production NCII	Agricultural Crop Production NCII	Agricultural Crop Production NCII
2:30 PM - 2:45 PM	Recess	Recess	Recess	Recess	Recess
2:45 PM - 3:45 PM	Agricultural Crop Production NCIII	Agricultural Crop Production NCIII	Agricultural Crop Production NCIII	Agricultural Crop Production NCIII	Agricultural Crop Production NCIII
3:45 PM - 4:45 PM	Agricultural Crop Production NCIII	Agricultural Crop Production NCIII	Agricultural Crop Production NCIII	Agricultural Crop Production NCIII	Agricultural Crop Production NCIII

2nd Semester S.Y. 2027-2028					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
7:30 AM - 8:30 AM	Anumal Health Care Management NCIII	Anumal Health Care Management NCIII	Anumal Health Care Management NCIII	Anumal Health Care Management NCIII	Anumal Health Care Management NCIII
8:30 AM - 9:30 AM	Animal Production (Poultry)	Animal Production (Poultry)	Animal Production (Poultry)	Animal Production (Poultry)	Animal Production (Poultry)
9:30 AM - 9:45 AM	Recess	Recess	Recess	Recess	Recess
9:45 AM - 10:45 AM	Animal Production NCII (Large Ruminants)	Animal Production NCII (Large Ruminants)	Animal Production NCII (Large Ruminants)	Animal Production NCII (Large Ruminants)	Animal Production NCII (Large Ruminants)
10:45 AM - 11:45 AM	Animal Production NCII (Swine)	Animal Production NCII (Swine)	Animal Production NCII (Swine)	Animal Production NCII (Swine)	Animal Production NCII (Swine)
11:45 AM - 12:30 AM	Lunch	Lunch	Lunch	Lunch	Lunch
12:30 PM - 1:30 PM	Aqua Culture NCII	Aqua Culture NCII	Aqua Culture NCII	Aqua Culture NCII	Aqua Culture NCII
1:30 PM - 2:30 PM	Aqua Culture NCII	Aqua Culture NCII	Aqua Culture NCII	Aqua Culture NCII	Aqua Culture NCII
2:30 PM - 2:45 PM	Recess	Recess	Recess	Recess	Recess
2:45 PM - 3:45 PM	Artificial Insemination NCII	Artificial Insemination NCII	Artificial Insemination NCII	Artificial Insemination NCII	Artificial Insemination NCII
3:45 PM - 4:45 PM	Fish Capture NCII	Fish Capture NCII	Fish Capture NCII	Fish Capture NCII	Fish Capture NCII

Proposed Long-Term Plan of Partnerships with Private and Government Organizations

The Agri-Fisheries strand at MNHS seeks to build strong, lasting partnerships with government agencies-such as DA, TESDA, DepEd, DENR, and LGU-to ensure sustainability, technical support, teacher training, curriculum enhancement, and funding aligned with local and national priorities. Collaborations with private sector players like agricultural equipment manufacturers, aquaculture firms, and Agri-tech companies will provide practical training, internships, and access to modern technologies. Community ties with local farmers, fisherfolk, and cooperatives will offer mentorship and hands-on learning in traditional and sustainable practices. Additionally, international partnerships with agricultural organizations, academic institutions, and NGOs will foster innovation, cultural exchange, and global best practices. These comprehensive collaborations will ground the program in real-world applications, secure vital resources, and enrich student experiences,

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making the strand a key driver of education and local development. As Altbach and Knight (2007) highlight, internationalization enhances institutional capacity, academic quality, and global competencies, supporting sustainable progress in technical and vocational education

Table 4: Proposed Implementation Timeline for Agri-fisheries Strand

Phase	Timeline	Key Activities
Phase 1: Planning & Assessment	Month 1–2	- Conduct feasibility study - Consult stakeholders (LGUs, DepEd, parents, farmers) - Identify facility and teacher needs
Phase 2: Resource Mobilization	Month 3–4	- Secure funding (DepEd, LGUs, NGOs, private grants) - Procure equipment and materials - Finalize community partnerships
Phase 3: Curriculum & Staff Development	Month 5–6	- Review and localize curriculum - Conduct teacher training - Develop co-teaching modules with local experts
Phase 4: Infrastructure Preparation	Month 6–7	- Renovate and prepare learning facilities (e.g., dei farms, aquaculture sites) - Set up basic tools and supplies
Phase 5: Community Orientation	Month 8	- Launch awareness campaign - Conduct community forums and parent-student briefings
Phase 6: Pilot Implementation	Month 9–12	- Begin initial classes and practical sessions - Monitor teaching and student engagement - Adjust based on feedback
Phase 7: Full Implementation	Year 2 onwards	- Expand enrollment - Strengthen industry linkages for immersion - Evaluate and refine program based on outcomes

The implementation of the Agri-Fisheries strand at MNHS follows a six-phase timeline to ensure effectiveness and sustainability. Phase 1 (Months 1–3) focuses on planning and assessment through environmental scans, stakeholder consultations, and gauging student interest to align the program with local needs. Phase 2 (Months 4–6) involves building partnerships with government agencies like DepEd, DA, and BFAR, and securing technical and financial support from private entities. Phase 3 (Months 7–9) centers on finalizing the curriculum by integrating traditional knowledge with industry-relevant and scientific approaches, alongside teacher training. Phase 4 (Months 10–12) addresses infrastructure upgrades and procurement of necessary equipment for hands-on learning. The program officially launches in Phase 5 (Year 2, start of school year) with student enrollment and class commencement. Phase 6 (Ongoing from Year 2) emphasizes continuous monitoring, evaluation, and adjustment based on feedback from students, teachers, and the community to maintain relevance and impact. This timeline not only guides implementation but also aims to empower students, strengthen local economies, and build a resilient community.

Potential Risks Related to the Implementation of Agri-Fisheries Program

Despite its benefits, the Agri-Fisheries program at MNHS faces several challenges. Key concerns include the lack of specialized equipment and up-to-date materials essential for practical learning. Although land preparation and partnerships are underway, securing comprehensive resources remains difficult. A shortage of qualified teachers and industry experts threatens instructional quality, especially without adequate technical training. Financial sustainability is uncertain, as initial funding may not guarantee ongoing support, risking program continuity and maintenance. Environmental risks like typhoons and flooding can disrupt outdoor activities critical to the strand. Student interest may vary, with some perceiving the program as physically demanding or less appealing, potentially affecting retention. Community partner participation may be inconsistent due to financial or time constraints, impacting hands-on learning opportunities. Additionally, bureaucratic hurdles and weak coordination among agencies such as DepEd, DA, TESDA, and LGU could delay key processes. However, proactive planning, strong community engagement, and effective communication can build a resilient program. As Gamage and Pang (2003) highlight, successful decentralization depends on collaborative partnerships among local and governmental stakeholders, enabling MNHS to overcome institutional gaps and ensure the program’s long-term success.

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ON MANAGEMENT STUDY: Risk Assessment and Mitigation Strategies

Table 5: Risk Mitigation Matrix: Agri-Fisheries SHS Program of MNHS

Identified Risk	***Risk Level***	***Mitigation Strategy***	***Responsible Entities***
Lack of specialized tools and equipment	*High*	*Forge partnerships with LGU, DA, TESDA, and private donors for equipment donations and grants*	*School Admin, LGU, DA, TESDA*
Limited availability of trained teachers	*High*	*Provide scholarships, training, and capacity-building workshops in partnership with TESDA and SUCs*	*DepEd, TESDA, School Head*
Insufficient funding for sustained operations	*High*	*Implement income-generating school projects; seek funding through grants, LGU subsidies, and NGOs*	*School Admin, LGU, PTA, NGOs*
Climate and environmental risks (e.g., typhoons, drought)	*Moderate*	*Create contingency plans; establish covered farming areas and introduce climate-resilient farming practices*	*School Admin, DA, Science Teachers*
Low student interest or engagement	*Moderate*	*Conduct career orientations and success story sharing sessions with local farmers and fisherfolk*	*Guidance Office, Subject Teachers, Local Partners*
Inconsistent support or participation from community partners	*Moderate*	*Formalize partnerships through MOAs; assign focal persons to maintain regular communication*	*School Admin, LGU, Barangay Council*
Delays in inter-agency coordination and bureaucracy	*Moderate*	*Establish a local inter-agency task force to streamline communications and monitor implementation progress*	*DepEd, DA, TESDA, LGU*
Inadequate maintenance of facilities and learning materials	*Low*	*Assign maintenance team; integrate sustainability practices (e.g., student-led upkeep as part of activities)*	*School Admin, TLE Teachers, Students*

Table 5 outlines a framework for planning, monitoring, and improving the Agri-Fisheries strand at MNHS by addressing potential risks to its success and sustainability. Key challenges include limited funding due to the school's location in a geographically isolated and disadvantaged area, which will be addressed through partnerships with government agencies (DA, TESDA, LGUs), DepEd programs, and private donors. The shortage of technical expertise will lead to collaborations for teacher training and hiring part-time experts. To support hands-on learning, the school should prioritize phased acquisition of essential tools and sought donations from NGOs and cooperatives. Infrastructure gaps, such as the lack of a fisheries lab, will be mitigated by building modular facilities and securing access to local fishponds through community agreements. To boost student enrollment and retention, advocacy efforts will highlight local success stories and align the curriculum with community needs. Environmental risks will be managed by integrating climate-resilient practices and disaster preparedness. Continuous community involvement will ensured strong support for immersion activities. Administrative delays will be minimized through proactive communication with

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DepEd and partners. These strategies will collectively establish a resilient foundation for the program, and will equip students with skills rooted in local strengths. As Haddad and Demsky (1995) emphasize, educational reforms succeed when they are locally grounded, stakeholder-driven, and sustainability-focused-principles exemplified by MNHS's risk-informed, community-centered approach.

Table 6: Contingency Response Timeline for Agri-Fisheries Program

Risk	Timeline	Action Steps	Responsible Entities
Lack of specialized tools and equipment	Months 1–3 (Immediate & Short-term)	Identify equipment needs Forge partnerships with LGU, DA, TESDA, private donors Submit proposals for donations/grants Begin phased procurement	School Admin, LGU, DA, TESDA
Limited availability of trained teachers	Months 1–6 (Immediate & Medium-term)	Assess teacher gaps Coordinate with DepEd, TESDA, SUCs for scholarships and training Organize capacity-building workshops Recruit part-time experts if needed	DepEd, TESDA, School Admin
Insufficient funding for sustained operations	Months 2–6 (Short- & Medium-term)	Launch school-based income-generating projects Apply for LGU/PTA/NGO funding Monitor and adjust budgets quarterly	School Admin, LGU, PTA, NGOs
Climate and environmental risks	Months 2–12 (Short- & Long-term, Ongoing)	Develop contingency plans for typhoons/droughts Construct covered farming areas Integrate climate-resilient practices into curriculum Schedule activities seasonally	School Admin, DA, Teachers
Low student interest or engagement	Months 1–6 (Ongoing)	Conduct advocacy campaigns and orientations Share success stories from local agri-fishery professionals Align curriculum with student/community interests	Guidance Office, Teachers, Local Partners
Inconsistent community participation	Months 1–12 (Ongoing)	Formalize partnerships via MOAs Assign focal persons for coordination Hold regular meetings for feedback and planning	School Admin, LGU, Barangay Council
Delays in inter-agency coordination/bureaucracy	Months 1–12 (Ongoing)	Establish a local inter-agency task force Schedule regular coordination meetings Track and follow up on documentation and approvals	DepEd, DA, TESDA, LGU
Inadequate maintenance of facilities/materials	Months 4–12 (Medium- & Long-term, Ongoing)	Assign maintenance team Integrate sustainability and student-led upkeep into activities Conduct periodic facility checks	School Admin, TLE Teachers, Students

During **Phase 1 (Months 1–3)**, the program will focus on identifying critical needs and gaps, such as specialized equipment, trained teachers, and funding sources. Efforts will be made to initiate partnerships with government agencies (LGU, DA, TESDA), submit proposals for equipment donations and grants, and begin advocacy and orientation activities to boost student interest and engagement. At the same time, community and agency coordination teams will be formed to ensure smooth communication and collaboration among all stakeholders.

Moving into **Phase 2 (Months 2–6)**, the school will start procuring necessary tools and materials, launch teacher training and recruitment initiatives in partnership with DepEd, TESDA, and SUCs, and implement

school-based income-generating projects to support operational sustainability. Community partnerships will be formalized through Memoranda of Agreement (MOAs), and regular meetings will be scheduled to maintain consistent support and participation.

In **Phase 3 (Months 4–12)**, the focus shifts to constructing or upgrading covered farming areas and other essential facilities, integrating climate-resilient practices and risk management protocols into daily operations, and assigning as well as training maintenance teams for ongoing upkeep of learning materials and infrastructure. Monitoring, evaluation, and necessary adjustments will be conducted continuously to ensure the program remains effective and responsive to emerging challenges.

Ongoing throughout Year 1 and beyond, the program will hold regular review meetings with stakeholders, maintain continuous communication with partner agencies, update risk mitigation strategies as needed, and sustain student and community engagement through advocacy, recognition, and participation in program activities. This cyclical and proactive approach ensures the Agri-Fisheries strand remains resilient, relevant, and impactful for the MNHS community.

On the Financial Study: Financial Projections and Cost-Benefit Analysis

The study aimed to assess the budget requirements for establishing and maintaining the TVL Track alongside the Agri-Fisheries Strand at Milbuk National High School, covering expenses for equipment, teacher training, and operational needs. It also explored potential funding sources-including government grants, school funds, and industry sponsorships-to support the program's long-term financial sustainability. A financial forecast and cost-benefit analysis for the proposed Agri-Fisheries Strand is summarized in table format, detailing projected costs and identifying strategies to secure necessary resources for effective implementation and ongoing success.

Table 7: Financial Projections and Cost-Benefit Analysis

Category	Details	Amount (₱)
Initial Investment (Year 1)		₱880,000
	Construction of facilities (greenhouse, aquaculture pond, agricultural land, storage room)	₱420,000
	Purchase of tools, aquaculture supplies, and lab kits	₱220,000
	Digital needs (computers, mobile devices, internet connection)	₱150,000
	Curriculum development and teacher training	₱90,000
Annual Operating Cost (Year 2 onwards)		₱170,000
	Maintenance of facilities and tools	₱50,000
	Replenishment of seeds, feeds, and fertilizers	₱30,000
	Continued teacher training	₱25,000
	Student immersion activities	₱40,000
	Utilities and internet services	₱25,000
Expected Benefits		
	Financial: Income from selling student-grown products	₱30,000–₱50,000/year
	Non-financial: Student skills development, improved livelihoods, food security, regional growth	Not directly monetized

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The proposed Establishment of Agri-Fisheries strand at MNHS Senior High School Program will be established with a clear, sustainable financial plan, dividing costs into an initial investment and ongoing annual expenses. The first year required ₱880,000, covering the construction of essential facilities (₱420,000), purchase of tools and laboratory kits (₱220,000), investment in digital technology (₱150,000), and curriculum development and teacher training (₱90,000). From the second year onward, annual operational costs are projected at ₱170,000 for maintenance, supplies, continued teacher training, student immersion activities, and utilities. The program is expected to generate ₱30,000–₱50,000 yearly through student-led enterprises, while also equipping students with valuable agri-fisheries skills that support local food security and economic growth. This initiative not only meets educational and workforce goals but also strengthens community resilience and self-sufficiency. As McGrath (2012) notes, effective technical-vocational education drives rural transformation, improves employability, and fosters inclusive development-making MNHS's investment both a strategic and transformative step for the community.

On the Socio-Economic Study: **Ethical and Socio-Cultural Considerations Educational Projects**

When implementing the Agri-Fisheries Program at MNHS, it was crucial to integrate ethical and socio-cultural considerations to ensure the initiative's effectiveness and sustainability. Aligning the program with community values, respecting cultural traditions, and adhering to ethical standards helped safeguard participants and foster community trust. As Serpell (1993) emphasizes, educational programs are more successful and lasting when they reflect local norms and involve the community as active partners. By valuing local knowledge and customs, MNHS increased program acceptance, built stakeholder ownership, and encouraged inclusive participation-all essential for long-term success.

Ethical Considerations:

The Agri-Fisheries Program at MNHS was designed to be inclusive and equitable, ensuring all students-regardless of gender, socioeconomic status, or ability-had equal access and support. Special attention was given to providing accommodations for students with disabilities and to upholding transparency, accountability, and informed consent, especially for hands-on and field-based activities. Confidentiality and data protection were prioritized, with personal information managed responsibly and used only for educational purposes, always with explicit consent.

Socio-Cultural Considerations:

The program respected and integrated Milbuk's local values, traditions, and knowledge systems. By blending traditional practices with modern, sustainable methods, the curriculum became both culturally relevant and innovative. Community members-including farmers and fisherfolk-were actively involved in planning, implementation, and evaluation, ensuring the program addressed real community needs and fostered a sense of ownership. Their input shaped the curriculum and provided students with practical, real-world learning experiences.

Gender Sensitivity:

The program promoted gender equity by providing equal opportunities for both male and female students in all activities, challenging traditional gender roles in agriculture and fisheries. This approach empowered female students to participate fully and take on leadership roles, advancing gender equality within the sector.

Cultural Sensitivity:

Educational materials and teaching strategies reflected Milbuk's customs, language, and values. Lessons incorporated local dialects and narratives, and teaching methods respected community beliefs, ensuring the program was relevant, respectful, and well-accepted by learners and their families.

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Community Benefits and Economic Resilience:

The Agri-Fisheries Program aims to boost Milbuk's socio-economic resilience by equipping students with sustainable agriculture and fisheries skills that improve local livelihoods. Graduates applying modern practices can enhance productivity, increase fish yields, and strengthen the local economy, where farming and fishing are primary income sources. This proposed program will also create job opportunities, promoting community self-sufficiency. Engaging local farmers and fisherfolk as mentors fosters knowledge exchange, strengthens community bonds, and builds shared responsibility. By integrating ethical and socio-cultural values, the program respects traditions while introducing innovative, sustainable methods. Its emphasis on inclusivity, gender equity, cultural sensitivity, and community involvement lays a strong foundation for lasting economic development and empowerment in Milbuk.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

On Market Study: Educational Needs and Market Analysis

The proposed Agri-Fisheries Program at MNHS is well-positioned to address local educational and economic needs through specialized training aligned with community priorities and government sustainability goals. While existing infrastructure and community engagement provide a strong foundation, challenges such as limited equipment, qualified instructors, and funding must be addressed. Success relies on forming strategic partnerships with agencies like DA and TESDA, improving facilities, investing in teacher development, and collaborating with local farmers and fisherfolks. Promoting inclusivity through financial aid, ensuring active community participation, and implementing continuous monitoring and long-term planning are essential for the program's sustainability. These measures will enable MNHS to establish a sustainable program that empowers students and supports local economic growth.

On Technical Study: Strategic Planning and Sustainability

The projected Agri-Fisheries Program at MNHS holds strong potential to fulfill the community's educational and economic needs by providing essential skills in sustainable agriculture and fisheries. The technical study highlights the importance of a well-structured curriculum, adequate infrastructure, and active community involvement, including support from farmers, fisherfolks, and government agencies. Addressing challenges such as securing continuous funding, maintaining facilities, and providing ongoing teacher training is critical for long-term sustainability. Success depends on sustained investments, strategic partnerships with local industries and agencies like DA and TESDA, and robust professional development. Engaging stakeholders throughout planning and implementation, alongside effective monitoring and evaluation, will ensure the program remains relevant and impactful, contributing significantly to regional agricultural and fisheries development.

On the Management Study: Risk Assessment and Mitigation Strategies

The management study identified key risks to the Agri-Fisheries Program at MNHS, including financial constraints, lack of technical expertise, environmental challenges, and institutional delays. To mitigate these, it recommended forming partnerships with government agencies, the private sector, and educational foundations to secure funding, alongside faculty professional development in collaboration with TESDA. Environmental risks should be managed through contingency planning and adaptive practices, while institutional delays require clear communication and a dedicated project management team. Addressing student engagement through experiential learning and local business partnerships is vital for retention. Overall, proactive risk management and stakeholder collaboration are essential to ensure the program's sustainability and positive impact on students and the community.

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On the Financial Study: Financial Projections and Cost-Benefit Analysis

The financial study of the proposed Agri-Fisheries Program at MNHS confirms its viability by thoroughly assessing implementation and operational costs alongside potential funding sources such as government agencies, NGOs, and private partners. The financial projections cover infrastructure, equipment, technology, personnel, and ongoing expenses over five years, ensuring a comprehensive budgeting approach. The cost-benefit analysis demonstrates that the program's long-term economic, social, and environmental benefits-such as improved student employability, increased local income, sustainable practices, and enhanced food security-far outweigh the initial investment. By fostering entrepreneurship and strengthening community resilience through strategic partnerships and practical training, the program promises significant returns that support regional development and sustainability in agriculture and fisheries.

On the Socio-Economic Study:

The socio-economic study highlights that the success of the proposed Agri-Fisheries Program at Milbuk National High School depends on integrating ethical and socio-cultural considerations throughout its planning and implementation. Ensuring equal access, gender inclusivity, transparency, and respect for all participants fosters fairness and accountability. The program's design must honor local traditions by blending indigenous knowledge with sustainable modern practices, reflecting the community's diverse cultural heritage. Active community engagement-including farmers, fisherfolk, parents, and leaders-builds ownership and aligns the program with local needs. By upholding these ethical and cultural values, the program not only equips students with vital skills but also supports the community's well-being and sustainable development, positioning the initiative as a catalyst for positive social change in Milbuk.

On the Decision to Implement the Proposed Agri Fisheries Program

Recommendations

Market Study: Educational Needs and Market Analysis

The study recommends that Milbuk National High School strengthen collaborations with key government agencies such as the Department of Agriculture (DA), TESDA, and local government units (LGUs) to secure the technical support, funding, and resources necessary for the Agri-Fisheries Program's success. Priority should be given to developing specialized infrastructure, including laboratories, greenhouses, and fishponds, to provide effective hands-on training. Building teacher capacity through continuous professional development is essential to keep instructors updated on the latest techniques and innovations. Strong community involvement must be fostered by actively engaging parents, local farmers, fisherfolk, and community leaders in planning and implementation to ensure the program's relevance and support. To promote inclusivity, the school should implement financial aid, scholarships, and subsidies for underprivileged students. Finally, establishing a regular monitoring and evaluation system is critical to gather stakeholder feedback and enable the program to adapt continuously to evolving community and industry needs.

Technical Study: Strategic Planning and Sustainability

This study recommends securing continuous investments in infrastructure and equipment through strong partnerships with government agencies and private sector collaborators to ensure the Agri-Fisheries Program's long-term sustainability. Prioritizing faculty development via ongoing professional training is essential for delivering high-quality, relevant instruction. Strengthening ties with industry partners like DA, TESDA, and local businesses will provide students with valuable internships and real-world experience, enhancing employability. Active involvement of farmers, fisherfolk, and parents in curriculum development and school activities is crucial for program relevance and community support. Sustainability planning should include reliable funding, regular infrastructure maintenance, and curriculum updates aligned with technological and market changes. Finally, establishing a robust monitoring and evaluation system is vital for continuous program assessment and improvement.

Financial Study: Financial Projections and Cost-Benefit Analysis

Because of the considerable initial funding needed, Milbuk National High School had to actively seek out various sources of funding, including government grants, collaborations with the private sector, and community fundraising efforts. A robust financial management system needed to be put in place to guarantee transparency and effective resource utilization for the duration of the program. By expanding collaborations with local agriculture and fisheries businesses, the program could benefit from sponsorships, resource-sharing agreements, and internship opportunities, thereby enhancing its financial sustainability. A noteworthy portion of the funding needed to be directed towards obtaining modern equipment for farming and fisheries, along with digital resources to improve the educational experience. Additionally, it was advised that a specific budget for the professional development of teachers be created to uphold high teaching standards. By highlighting the economic prospects associated with careers in agriculture and fisheries, the school could increase both student enrollment and community backing, ensuring that the program continued to yield significant benefits for local economic development.

Socio-Economic Study: Ethical and Socio-Cultural Considerations

Ethical and socio-cultural factors played a crucial role in shaping the development and execution of the Agri-Fisheries Program. It was essential to ensure that the program was accessible to all students, regardless of their socio-economic status or gender. The curriculum was designed with cultural sensitivity in mind, merging traditional knowledge in agriculture and fisheries with contemporary, sustainable practices. Community engagement—including consultations with indigenous groups and local leaderswas prioritized at every stage of the program to ensure it remained relevant and widely accepted. The rollout of new innovations in agriculture and fisheries was implemented gradually, providing the community with time to adjust and reduce disruptions to traditional lifestyles. The curriculum incorporated ethical standards related to sustainable farming and fishing, highlighting the significance of environmental stewardship and social responsibility for students. Ultimately, fostering community ownership by promoting active involvement and leadership within the program enhanced long-term commitment and contributed to its enduring success.

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