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Implementation of Gulayan Sa Paaralan in Public Elementary Schools of District I-A, San Carlos City Division

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Abstract

The Gulayan sa Paaralan Program was introduced to strengthen food security, promote environmental awareness, and encourage sustainable gardening practices among learners and school communities. Despite its long-standing implementation, varying levels of compliance and persistent challenges have continued to affect its overall effectiveness in public elementary schools. This study aimed to assess the extent of implementation of the Gulayan sa Paaralan Program in public elementary schools in District I-A, San Carlos City Division, Pangasinan, focusing on capacity-building, establishment and maintenance of school gardens, sustainability initiatives, advocacy campaigns, and community engagement. It also sought to determine differences in perception between teachers and school heads and to identify the seriousness of problems encountered in implementing the program.

A descriptive-survey research design was employed, involving teachers and school heads through total enumeration sampling. Data were collected using an adopted and validated questionnaire and analyzed using weighted mean to determine the extent of program implementation, t-test to examine differences in perceptions, and descriptive statistics to assess the seriousness of identified problems.

Results revealed that the overall implementation of the Gulayan sa Paaralan Program was rated at a moderate level. Among the domains, advocacy campaigns obtained the highest level of implementation, while establishment, maintenance, and sustainability of school gardens showed the lowest. Findings also indicated no significant difference between the perceptions of teachers and school heads regarding the program's implementation. The problems encountered were assessed as moderately serious, reflecting challenges that affect program continuity but do not critically hinder its operation. Based on these results, an action plan was formulated to strengthen compliance, enhance capacity, and improve sustainability efforts for the program.

The study highlights the need for continuous support, community partnerships, and structured monitoring to maximize the impact of Gulayan sa Paaralan in promoting food security and environmental stewardship in schools.

Keywords: *school gardening, sustainability, food security, program implementation, Gulayan sa Paaralan Program*

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INTRODUCTION

The Gulayan sa Paaralan Program (GPP) was established by the Department of Education as part of its initiatives to promote food security, nutrition awareness, and environmental stewardship among Filipino learners. School gardens have become a practical avenue for teaching children the value of sustainability and the importance of consuming nutritious food, particularly in communities where malnutrition remains a critical concern. Through vegetable gardening, schools are encouraged to engage learners, teachers, parents, and local stakeholders in cultivating crops that support healthy meals and enhance learning experiences across subject areas. The program also served as a strategy to strengthen community involvement and improve school-based feeding programs, making it a vital component of holistic child development.

Studies on school garden initiatives have consistently highlighted their positive impact. Research by Blair (2009) indicated that gardening activities improve students' environmental attitudes and promote healthier eating habits. Williams and Dixon (2013) reported that school gardens enhance learners' understanding of agriculture, biology, and nutrition through hands-on learning, while Ozer (2007) emphasized the role of community participation in sustaining school gardening programs. Local studies also showed that the success of the Gulayan sa Paaralan Program depends largely on teachers' capacity, resource availability, and administrative support. Despite these benefits, many schools continue to struggle with challenges such as insufficient materials, limited gardening skills, and inconsistent monitoring systems, which hinder the full implementation of the program.

Given these realities, the present study examined the extent of implementation of the Gulayan sa Paaralan Program in public elementary schools within District I-A, San Carlos City Division, Pangasinan. Specifically, it investigated the level of compliance in the areas of capacity-building, establishment and maintenance of school gardens, sustainability efforts, advocacy campaigns, and community engagement. It also sought to determine whether significant differences existed between the perceptions of teachers and school heads regarding program implementation, and to identify the seriousness of problems encountered. Ultimately, this study aimed to generate insights that would support the enhancement of the program and strengthen its long-term sustainability in schools.

MATERIALS AND METHODS

Research Design

The study employed a descriptive-correlational research design to determine the extent of implementation of the Gulayan sa Paaralan Program and to identify significant differences between the perceptions of teachers and school heads. The design was appropriate because it allowed the researcher to describe current practices and examine relationships among variables without manipulating any conditions.

Participants

The participants consisted of a total enumeration of 184 public elementary school teachers and 9 school heads from the public elementary schools in District I-A, San Carlos City Division, Pangasinan, for the School Year 2024–2025. All teachers and school heads in the district were included as respondents.

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Instruments

Data were gathered using a standardized and validated questionnaire checklist adopted from Castillo (2021). The instrument consisted of two parts: Part I measured the level of compliance in the implementation of Gulayan sa Paaralan in areas such as capacity building, establishment, maintenance, sustainability, advocacy, and community engagement; Part II measured the seriousness of problems encountered using a Likert-type scale.

Procedure

The researcher sought approval from the Schools Division Superintendent prior to data collection. Upon approval, the researcher personally visited each school to administer the questionnaires to teachers and school heads. Respondents were given sufficient time to answer the instrument, and all completed questionnaires were retrieved within a two-week period, resulting in a 100 percent retrieval rate.

Data Analysis

Descriptive statistics such as weighted means was used to determine the level of implementation and the seriousness of problems encountered. A t-test for independent samples at the 0.05 significance level was employed to determine significant differences between the perceptions of teachers and school heads regarding the level of implementation of the Gulayan sa Paaralan Program.

RESULTS AND DISCUSSION

LEVEL OF COMPLIANCE IN THE IMPLEMENTATION OF GULAYAN SA PAARALAN ALONG WITH CAPACITY-BUILDING AS PERCEIVED BY THE TEACHERS AND SCHOOL HEADS

The overall weighted mean (AWM = 2.95, Moderate) in **Table 2** indicates that the level of compliance in the implementation of capacity-building activities under the Gulayan sa Paaralan Program is moderate. This suggests that schools are making notable efforts to implement the program, particularly in stakeholder participation, availability of materials, and adoption of standardized training modules. However, areas such as participant feedback, accessibility of learning materials, and follow-up trainings were rated lower, highlighting opportunities for improvement to strengthen program effectiveness.

These findings align with prior studies that emphasize the importance of consistent training, adequate resources, and continuous engagement for successful school garden programs. Practically, schools should focus on improving training quality, ensuring materials are accessible, and conducting refresher sessions to sustain skills and knowledge. Policy-wise, stronger collaboration with local agricultural offices and educational authorities can provide additional support and monitoring to enhance program outcomes.

A limitation of this study is its reliance on self-reported perceptions, which may introduce bias, and its focus on a single district, which limits the generalizability of the results.

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Table 2
Level of Compliance in the Implementation of Gulayan sa Paaralan along with Capacity-Building as Perceived by the Teachers and School Heads

Capacity-Building	Teachers		School heads		Overall	
	Mean	DE	Mean	DE	AWM	DE
1. Division EPP/TLE supervisors take the lead in conducting orientation in schools.	2.95	M	2.94	M	2.95	M
2. Technical experts are invited from Department of Agriculture.	2.84	M	2.86	M	2.85	M
3. The school conducts training in line with the implementation of GPP.	3.13	M	3.04	M	3.09	M
4. The school coordinates with the Local Agriculture Office in the conduct of the training.	3.01	M	3.02	M	3.02	M
5. A standardized training module for all regions is adopted in the school.	3.11	M	3.13	M	3.12	M
6. Materials and equipment to be used for the establishment of nurseries and school garden are available.	3.21	M	3.24	M	3.23	M
7. Eligible donors and benefactors are identified and invited to participate in the planning stage.	3.09	M	3.02	M	3.06	M
8. Teachers participate in any capacity-building activities related to the Gulayan sa Paaralan Program (GPP)	3.2	M	2.92	M	3.06	M
9. Teachers, students, and staff actively participate in capacity-building activities relative to the total population in the school	3.33	M	3.32	M	3.33	M
10. Availability and accessibility of learning materials and tools provided during the capacity-building activities (e.g., handouts, manuals, gardening kits).	2.51	M	2.58	M	2.55	M
11. Follow-up training or refresher courses to ensure continued learning and skill-building for the stakeholders involved	2.67	M	2.72	M	2.70	M

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12. Feedback or satisfaction ratings from participants regarding the usefulness and relevance of the capacity-building activities to the successful implementation of the program	2.43	M	2.43	M	2.43	M
Total	2.96	M	2.94	M	2.95	M

LEVEL OF COMPLIANCE IN THE IMPLEMENTATION OF GULAYAN SA PAARALAN ALONG WITH ESTABLISHMENT, MAINTENANCE, AND SUSTAINABILITY OF SCHOOL GARDENS AS PERCEIVED BY THE TEACHERS AND SCHOOL HEADS

Table 3 shows that the overall level of compliance in the establishment, maintenance, and sustainability of school gardens under the Gulayan sa Paaralan Program is moderate (AWM = 2.68). This indicates that while schools are making efforts to manage gardens, engage students and teachers, and adopt innovative practices like crop diversification, there are notable areas for improvement, particularly in maintaining partnerships with stakeholders, securing gardens, and addressing space limitations.

The findings are consistent with existing literature, which emphasizes that school garden programs improve nutrition, environmental awareness, and student engagement but face challenges in sustainability, resource availability, and community involvement. Strengthening stakeholder collaboration, ensuring access to necessary resources, and implementing protective and space-optimized gardening measures are essential for sustaining these programs.

In terms of practice and policy, schools should prioritize continuous engagement with parents, local agricultural offices, and other stakeholders, alongside professional development for teachers to maintain garden operations effectively. Limitations of this study include reliance on self-reported perceptions, which may introduce bias, and the focus on a single district, which may limit generalizability.

Table 3
Level of Compliance in the Implementation of Gulayan sa Paaralan Along with Establishment, Maintenance, and Sustainability of School Gardens as Perceived by the Teachers and School Heads

Establishment, Maintenance, and Sustainability of School Gardens	Teachers		School heads		Overall	
	Mean	DE	Mean	DE	AWM	DE
The school use a minimum of 200 square-meter area or if space is limited, the school adopted container gardening.	2.51	M	2.64	M	2.58	M
The school adopted the “Crop Museum” technology to promote crop diversification.	2.8	M	2.87	M	2.84	M

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Starter seeds include preferred vegetable seeds that can help address malnutrition.	2.73	M	2.81	M	2.77	M
The school manages the establishment and maintenance of the school garden.	2.93	M	3	M	2.97	M
The school manages the production of seeds for the next cropping.	2.65	M	2.71	M	2.68	M
School gardens are continuously maintained and sustained through nurseries and seed production in partnership with stakeholders.	2.34	M	2.42	M	2.38	H
The school gardens are secured to protect the crops from stray animals.	2.43	M	2.73	M	2.58	M
Organic fertilizer and inputs are used to enhance soil fertility and improve production yield.	2.74	M	2.73	M	2.74	M
A set of garden tools is readily available in the school garden.	2.63	M	2.64	M	2.64	M
The school involves the PTA and stakeholders in maintaining the school garden.	2.53	M	2.56	M	2.55	M
Availability and use of necessary resources for garden maintenance, such as water supply, seeds, tools, compost, and fertilizers	2.63	M	2.71	M	2.67	M
Students and teachers are actively involved in the day-to-day maintenance and activities of the garden.	2.86	M	2.88	M	2.87	M
Sustainability practices such as composting, rainwater harvesting, organic pest control, and crop rotation to ensure the long-term success of the garden.	2.61	M	2.63	M	2.62	M
Total	2.65	M	2.72	M		M

LEVEL OF COMPLIANCE IN THE IMPLEMENTATION OF GULAYAN SA PAARALAN ALONG WITH ADVOCACY CAMPAIGN AS PERCEIVED BY THE TEACHERS AND SCHOOL HEADS

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Table 4 shows that the overall level of compliance in the implementation of the Gulayan sa Paaralan advocacy campaign is moderate (AWM = 3.09). This indicates that while schools are actively promoting the program through contests, social media, and transparent reporting of proceeds, there are areas that need improvement, particularly in parental involvement, integration of nutrition lessons into the curriculum, and forming stronger partnerships with external stakeholders.

These results align with existing studies emphasizing that effective advocacy and social marketing are crucial for increasing program visibility and fostering behavioral change (Kotler & Lee, 2018). Likewise, Fullan (2017) stresses that strong collaboration with community stakeholders is necessary to sustain school programs. Strengthening parental participation, curricular integration, and stakeholder engagement can improve the reach and impact of the program.

In practice, schools may enhance advocacy campaigns by designing structured community engagement activities, integrating garden-based nutrition lessons into multiple subjects, and formalizing partnerships with local agencies and NGOs. Limitations of this study include its reliance on perceptions, which may vary among respondents, and the focus on a single division, which may limit generalizability.

Table 4
Level of Compliance in the Implementation of Gulayan sa Paaralan Along With Advocacy Campaign As Perceived By The Teachers And School Heads

Advocacy Campaign	Teachers		School heads		Overall	
	Mean	DE	Mean	DE	AWM	DE
1. The school integrated in its curriculum the nutritional dimension of food production by contextualizing the lessons in subject areas such as Health, TLE, and EPP.	2.87	M	2.93	M	2.90	M
2. The school exerted effort to increase vegetable production and consumption by vigorously pursuing these in different types of media.	3.09	M	3.02	M	3.06	M
3. Poster-making, slogan writing, and cooking contests were conducted at the school.	3.23	M	3.24	M	3.24	M
4. Awareness of the Gulayan sa Paaralan Program are developed via print, broadcast, TV and social media.	3.13	M	3.1	M	3.12	M
5. Proceeds of the Gulayan sa Paaralan Program are posted in strategic areas and platforms.	3.09	M	3.37	M	3.23	M
6. Parents participate in the campaign or actively support the program (e.g., attending school meetings, volunteering in the garden, donating materials).	2.62	M	2.66	M	2.64	M

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7. Partnerships formed with local government units, businesses, or non-governmental organizations (NGOs) to support and promote the GPP	3.13	M	3.04	M	3.09	M
8. Community events or local outreach initiatives organized to support and promote the GPP, such as garden tours, agricultural fairs, or educational seminars.	3.21	M	3.21	M	3.21	M
9. Social media posts, shares, likes, and comments related to the GPP, indicating the level of online awareness and support for the program.	3.36	M	3.3	M	3.33	M
Total	3.08	M	3.10	M	3.09	M

LEVEL OF COMPLIANCE IN THE IMPLEMENTATION OF GULAYAN SA PAARALAN ALONG WITH COMMUNITY ENGAGEMENT AS PERCEIVED BY THE TEACHERS AND SCHOOL HEADS

Table 5 shows that the overall level of compliance in community engagement for the Gulayan sa Paaralan Program is moderate (AWM = 2.86). This suggests that while the program effectively fosters collaboration, shared ownership, and community input in school garden activities, there are areas that require improvement. Specifically, organizing educational events or workshops, promoting the program through local advocacy, and increasing parental participation scored lower, indicating gaps in engagement and awareness.

These findings are consistent with existing literature emphasizing the importance of active community involvement and shared responsibility in school-based programs. Epstein (2020) highlights that strong parental and community engagement enhances sustainability and program effectiveness, while Chawla and Heft (2017) argue that fostering a sense of ownership and collaboration ensures long-term success. Additionally, research on community gardens shows that organizing workshops and advocacy initiatives strengthens stakeholder participation and program visibility (Guitart et al., 2017).

Implications for practice include the need to implement targeted strategies to increase parental involvement, organize educational activities for the community, and actively promote the program to enhance awareness. Limitations include reliance on respondent perceptions, which may introduce bias, and the focus on a single school division, which may limit generalizability.

Table 5
Level of Compliance in The Implementation of Gulayan Sa Paaralan Along Community Engagement as Perceived by the Teachers And School Heads

Community Engagement	Teachers		School Heads		Overall	
	Mean	DE	Mean	DE	AWM	DE

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1. Community members collaborate with school staff to develop innovative approaches for sustaining and expanding GPP.	3.29	M	3.32	M	3.31	M
2. Community members assist in distributing produce from the school garden to those in need within the community.	2.76	M	3.01	M	2.89	M
3. Community events or workshops related to gardening and nutrition are organized as part of GPP.	2.43	M	2.73	M	2.58	M
4. Community members actively participate in planting and maintaining the school garden.	2.74	M	2.73	M	2.74	M
5. Parents or guardians of students actively participate in GPP activities and attend related meetings.	2.63	M	2.64	M	2.64	M
6. There is a sense of shared ownership of the school garden among community members.	3.28	M	3.29	M	3.29	M
7. Community members contribute ideas and suggestions for the types of crops to be planted in the school garden.	2.99	M	3.04	M	3.01	M
8. Local businesses or organizations provide support (financial or in-kind) for GPP activities.	2.86	M	2.88	M	2.87	M
9. The local community actively promotes GPP through word of mouth and social media.	2.61	M	2.63	M	2.62	M
10. The local community actively participates in planning and organizing GPP activities.	2.71	M	2.71	M	2.71	M
Total	2.83	M	2.90	M	2.86	M

DIFFERENCES IN THE LEVEL OF COMPLIANCE IN THE IMPLEMENTATION OF GULAYAN SA PAARALAN OF PUBLIC ELEMENTARY SCHOOL TEACHERS AND SCHOOL HEADS

Table 6 presents the comparison of perceptions between teachers and school heads regarding the level of compliance in implementing the Gulayan sa Paaralan Program. The results indicate no significant difference between the two groups, with teachers having an overall weighted mean of 2.88 and school heads at 2.91, both reflecting a moderate level of compliance. The computed t-value of 0.1154 is well below the critical value of 2.451 at a 0.05 significance level, leading to the acceptance of the null hypothesis.

This finding suggests consistency in how both groups perceive the program's implementation across capacity-building, garden establishment and maintenance, advocacy campaigns, and community engagement. Such alignment is beneficial for program planning and collaborative efforts, as teachers and school heads share similar views on strengths and areas for improvement. It supports coordinated strategies

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to enhance program compliance, such as improving parental involvement, ensuring resource availability, and strengthening advocacy initiative

Table 6
Significant Differences in the Level of Compliance in the Implementation of Gulayan Sa Paaralan of Public Elementary Teachers and School Heads

	Teachers		School Heads	
	Weighted Mean	DE	Weighted Mean	DE
Capacity-Building	2.96	M	2.94	M
Establishment, Maintenance, and Sustainability of School Gardens	2.65	M	2.72	M
Advocacy campaign	3.08	M	3.10	M
Community Engagement	2.83	M	2.90	M
Total	2.88	M	2.91	M

Computed t-value: 0.1154 @ df 3
Alpha: @ 0.05 level of significance
Critical Value: 2.451 df 3
Decision: accept the null hypothesis
Interpretation: No significant difference

EXTENT OF SERIOUSNESS OF PROBLEMS ENCOUNTERED BY TEACHERS

Table 7 presents the extent of seriousness of problems encountered in the implementation of the Gulayan sa Paaralan Program. The overall weighted mean of 1.99 indicates that, on average, the challenges are moderately serious (MS), reflecting manageable but noteworthy issues that require attention. These findings highlight the need for targeted interventions to secure resources, strengthen partnerships, and enhance community engagement. Moderate issues, including low production due to sterile land and students' unawareness of the garden's importance, indicate opportunities to provide educational support and technical guidance.

These results align with existing literature emphasizing that resource limitations, stakeholder collaboration, and community involvement are key determinants of school garden program success (Blair, 2020; Epstein, 2020). Addressing these challenges through funding initiatives, capacity-building, and awareness campaigns can enhance program compliance and sustainability.

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Table 7

Degree of Seriousness of Problems Encountered

Indicators	Teachers		Rank
	Mean	DE	
Inadequate garden tools to be used in the garden.	2.34	S	5
Insufficient fund to purchase the materials and equipment needed.	2.48	S	1
Lack of training on Gulayan sa Paaralan program	2.37	S	4
Lack of cooperation from the stakeholders.	2.42	S	2
Lack of dedication and commitment of teachers.	2.25	MS	6
Low production due to sterile land	1.98	MS	8
Poor monitoring and evaluation of the garden.	1.62	LS	10
Unavailability of space for the implementation of Gulayan sa Paaralan.	1,65	LS	9
Unawareness of the children on the importance of the garden.	2.01	MS	7
Weak support from the community and other stakeholders.	2.39	S	3
Total	1.99	MS	

Conclusion

The study revealed that the implementation of the Gulayan sa Paaralan Program in public elementary schools achieved a moderate level of compliance across all assessed areas, including capacity-building, establishment and maintenance of school gardens, advocacy campaigns, and community engagement. Both teachers and school heads shared similar perceptions, indicating consistency in understanding the program's implementation. Strengths were observed in advocacy efforts, stakeholder involvement, and active participation of students and staff. However, challenges such as limited funding, low parental and community engagement, and gaps in sustaining school gardens were identified as areas needing improvement.

To enhance the program's effectiveness, it is recommended that schools strengthen partnerships with local stakeholders, provide additional training and support for teachers, secure necessary resources, and implement consistent monitoring and evaluation practices. Future research could explore the long-term impact of school gardens on student nutrition, learning outcomes, and community food security. Addressing these areas can help ensure the sustainability and success of the Gulayan sa Paaralan Program.

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