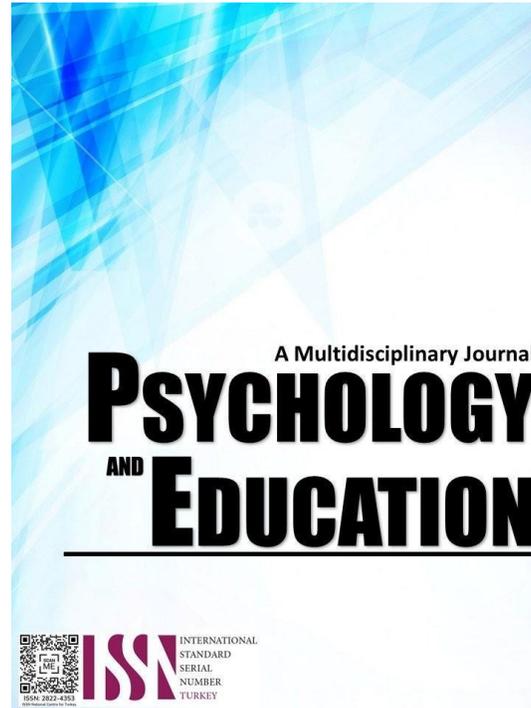


GARDENING PROGRAM IN SCHOOLS AND HOMES OF LEARNERS AND THE PERCEPTION OF THE USEFULNESS OF SCHOOL-BASED GARDENING



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Gardening Program in Schools and Homes of Learners and the Perception of the Usefulness of School-Based Gardening

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Abstract

This study explored the implementation of gardening programs in schools and homes and examined learners' perception of the usefulness of school-based gardening in Danggagan District, Bukidnon during the 2024–2025 school year. Specifically, it assessed the learners' participation in school gardening, their perception of its usefulness, the extent of gardening practice at home, and the relationship among these variables. Utilizing a descriptive-correlational research design, the study involved 253 Grade 6 learners selected through stratified proportional sampling. Data were collected using adapted questionnaires and analyzed through means, standard deviations, and Pearson correlation tests. Results revealed that learners often participated in school-based gardening activities, primarily in planting, weeding, and watering. They highly perceived the gardening program as beneficial, particularly in enhancing vegetable consumption awareness, practical knowledge, and collaboration skills. At home, learners moderately practiced gardening, emphasizing food security and dietary improvements, although selling produce was less common. Significant positive relationships were found between learners' perception of the usefulness of the school-based gardening program and their participation, as well as between participation in school gardening and the practice of home gardening. These findings affirm that school gardening initiatives foster greater environmental awareness, food security, and practical skills among learners, with implications extending to household practices. The study recommends strengthening school gardening programs through experiential learning, integrating gardening activities across the curriculum, and involving families and communities to sustain engagement. Future research should explore long-term impacts on learners' nutrition, academic achievement, and community resilience. Enhanced policies and support systems are also suggested to maximize the educational and societal benefits of gardening initiatives in schools and homes.

Keywords: *school-based gardening, learners' perception, food security, gardening participation, home gardening*

Introduction

The increasing challenges of food security, environmental sustainability, and livelihood development have become central concerns worldwide. In response to these issues, educational institutions are increasingly turning to school-based gardening programs to engage learners in sustainable practices and enhance their perception of the importance of food security. By providing learners with practical experience in gardening, the program encourages a greater appreciation for locally grown food, environmental conservation, and the role of sustainable livelihoods in ensuring long-term food security.

In the past years, school-based gardening programs have increasingly been recognized for enhancing learners' perception of sustainable livelihood and food security. The Department of Education (DepEd), under its core value Makakalikasan, supports the national government's efforts to protect and conserve the environment through the National Greening Program. The Gulayan sa Paaralan Program (GPP) is one of the sub-programs of the National Greening Program of the department to address malnutrition and hunger. (Memorandum No. 293, s. 2007)

Integrating school-based gardening programs into the K-12 curriculum, particularly in the context of Technology and Livelihood Education (TLE) or Edukasyong Pantahanan at Pangkabuhayan (EPP) subjects, can improve students' learning experiences by connecting practical gardening activities to academic content.

Gibson, K., & Hill, A. (2019) examined the role of community gardens in fostering sustainable livelihoods and resilience. Though not exclusively focused on school gardens, it provided insights into how such initiatives contribute to the perception of sustainable food systems. The researchers emphasized the role of gardens in building resilience to food insecurity, particularly in communities affected by socioeconomic and environmental challenges.

Another study by TeachMaverick (2020) explored various models of school garden programs, including vegetable gardens and hydroponic systems. These models are used to teach students about sustainability, food production, and nutrition. It suggests that school gardens are crucial in teaching children the importance of food security and environmental stewardship, which directly contributes to a broader perception of sustainable livelihoods. However, Hill et al. (2022) explored a community co-learning approach at Isabella Plains Early Childhood School in Australia, exploring how a food gardening program could be developed with community involvement. This study highlighted how gardening programs could help students understand sustainable livelihoods by connecting food production to broader environmental and social issues. It also explored the potential of such programs to teach students about food security, especially in the context of cultural diversity and inter-generational learning.

Further, the study of Soward, Byrne, Hills, & Ahuja (2023) examined how school gardens improve health and well-being for school-aged children, with an emphasis on increasing fruit and vegetable consumption and addressing childhood obesity. It also discusses how gardening programs can foster the perception of food security by linking nutrition-based and garden-based education to broader sustainability themes. The study found that these programs contributed to positive outcomes in terms of dietary improvement, particularly by enhancing students' perception of nutrition and food security. The research utilized a systematic realist approach to analyze how these interventions changed students' attitudes toward healthy eating and food access.

It is on the premise that the researcher wanted to find the impact of the gardening program in schools and homes of learners and the perception of the usefulness of school-based gardening on the effectiveness of educational outcomes and challenges in implementation. To answer how students perceive the relationship between participation in gardening programs in school and the learner's perception of the usefulness of School-Based Gardening Programs and the implementation of gardening at home.

Research Questions

This paper aims to examine the influence of the implementation of the gardening program in schools and homes of learners and the perception of the usefulness of school-based gardening. Specifically, this study sought to answer the following questions:

1. What is the level of participation of the learners in school-based gardening in schools?
2. What is the level of learners' perception of the usefulness of a School-Based Gardening Program?
3. What is the level of practice of the gardening program in the home of the learners?
4. Is there a significant relationship between the level of learners' perception of the usefulness of the school-based Gardening Program and the participation of learners in school-based gardening in schools?
5. Is there a significant relationship between the level of participation in school-based gardening in schools and the level of practice of gardening in the homes of the learners?

Methodology

Research Design

This study employed the descriptive-correlational method to determine how gardening participation affects learners' knowledge and attitudes on the usefulness of School-Based Gardening and food security at home. The independent variable of the study is the usefulness of School-Based Gardening and the implementation of gardening at home, while the dependent variable is the learners' level of participation in the School-Based Gardening Program. A 5-point Likert scale survey questionnaire was used to determine the frequency of the school-based gardening programs and learners' perception of sustainable livelihood and food security. The results were correlated.

Participants

The participants of the study were the grade 6 pupils of the 14 schools of Dangcagan District, Bukidnon for the school year 2024-2025. With a total population of 691 learners, Slovin's formula ($n = N / (1 + Ne^2)$), whereas $n = 691 / [1 + (691 \times (.05)^2)]$ determined the number of students who participated in this study. The study used a stratified proportional sampling method to ensure representative participation from all 14 elementary schools within Dangcagan District. Initially, complete and accurate lists of all Grade 6 pupils from each school were acquired. Based on the calculated sample size of 253 derived from Slovin's formula and the proportional distribution of pupils across schools.

Instrument

The researcher used an adapted questionnaire. The questionnaire consisted of three parts. Part I is on the level of the Learners' Participation in School-Based Gardening, adapted from the study of Dennis W. Duncan, Ashley Collins, et al. (2016) in their research entitled "The Impacts of a School Garden Program on Urban Middle School Youth". Part II- Level of Perception of the Usefulness of School-Based Gardening Program adapted from the study of I.W. Baog, Med, et al.(2023) in their research entitled "The Effectiveness of the Gulayan sa Paaralan Program as Perceived by Junior High School Students in Davao City ". Part III is on the Level of Implementation of Gardening and Food Security at Home adapted from the study of J.B. Dorado, R.V. Viajor, et.al (2018) in their research entitled "Does Backyard Vegetable Gardening Enhance Perceived Household Food Security and Dietary Diversity? A case study in the Philippines.

The respondents of the study identified their level of participation in School-Based Gardening based on the Likert scoring found below.

Table 1. *Level of Participation of School-Based Gardening Program*

Scale	Numerical Description	Qualitative Description	Qualifying Statement
5	4.21-5.0	Always	5 times out of 5 instances
4	3.41-4.20	Often	4 times out of 5 instances
3	2.61-3.40	Sometimes	3 times out of 5 instances
2	1.81-2.60	Merely	1-2 times out of 5 instances
1	1.0-1.80	None	Not at all

The scoring for the level of perception of the usefulness of school-based gardening program was the respondent had to choose only from the alternative levels using the 5 –Strongly Agree, 4 -Agree, 3 – Moderately Agree, 2- Disagree, 1-. Strongly Disagree

Table 2. *Level of Usefulness of School-Based Gardening Program*

Scale	Numerical Description	Qualitative Description	Qualifying Statement
5	4.21-5.0	Strongly Agree	Very Highly Perceived
4	3.41-4.20	Agree	Highly Perceived
3	2.61-3.40	Moderately Agree	Moderately Perceived
2	1.79-2.60	Disagree	Less Perceived
1	1.0-1.80	Strongly Disagree	Very Less Perceived

Scoring for the level of implementation of gardening at home, the respondent had to choose only from the alternative levels using the 5 –Outstanding, 4 -Very Satisfactory, 3 – Satisfactory, 2- Unsatisfactory, and 1- Poor.

Table 3. *Level of Implementation of Gardening at Home*

Scale	Numerical Description	Qualitative Description	Qualifying Statement
5	4.21-5.0	Outstanding	Has a garden & food supply throughout the year
4	3.41-4.20	Very Satisfactory	Has a garden & food supply that lasts 10 months
3	2.61-3.40	Satisfactory	Has a garden & food supply that lasts 8 months
2	1.81-2.60	Unsatisfactory	Has a garden & food supply that lasts 6 months
1	1.0-1.80	Poor	Has a garden & food supply that lasts 4 months

Procedure

An endorsement letter was secured from the Dean of Graduate Studies asking permission to conduct this study. A letter of request was prepared by the researcher addressed to the School Principal through the schoolteacher requesting to conduct the questionnaire to the respondents of the study.

To determine the participation of learners in the School-Based Gardening Program and the perception of the usefulness of School-Based Gardening, the learners were requested to answer the survey questionnaire. The respondents were given appropriate orientation on the research instrument and likewise reminded to answer the items carefully and honestly, following their ability. The completed questionnaires were tabulated, analyzed, and interpreted.

Data Analysis

The researcher employed the following statistical treatment in the study on the relationship between the implementation of school-based gardening programs and learners' perception of the usefulness of school-based gardening and its implementation at home.

For problem 1, on the level of participation of the learners in school-based gardening in schools based on their responses, the mean and standard deviation were computed.

For problem 2, on the level of learners' perception of the usefulness of a School-Based Gardening Program, the mean and standard deviation were computed.

For problem 3, on the level of practice of the gardening program in the home of the learners, the mean and standard deviation were computed.

For problem 4, on the significant relationship between the level of learners' perception of the usefulness of the School-Based Gardening Program and the participation of learners in school-based gardening in schools, the correlation was computed.

For problem 5, on the significant relationship between the level of participation in school-based gardening in schools and the level of practice of gardening in the homes of the learners, the correlation was computed.

Ethical Considerations

To ensure informed participation, parents were provided with detailed, age-appropriate explanations of the study's purpose, procedures, potential risks and benefits, and freedom to withdraw or refuse participation. Similarly, learners received age-appropriate explanations, and their understanding was verified. Both parents and children were given ample opportunity to ask questions and seek clarifications before providing signed parent consent and child assent.

Results and Discussion

This section presents, discusses, analyzes, and interprets the data gathered from the data-gathering tool – the questionnaire. Moreover, this chapter aims to investigate, discuss, and analyze the participation and perception of learners regarding the usefulness of the implemented gardening program in both schools and homes.

The findings of the study are presented in textual and tabular forms. Problem 1 sought to determine the level of participation of the learners in school-based gardening in schools. Table 2 shows the participation of the learners in School-Based Gardening in schools.



Table 4. *Level of Participation of the Learners in School-Based Gardening in Schools*

Statements	Mean	SD	QD	QS
1. I participated in gardening in school.	4.43	0.91	A	5 times out of 5 instances
2. I remove the weeds to keep my plants healthy.	4.34	0.95	A	5 times out of 5 instances
3. I enjoy taking care of the plants in my garden.	4.29	0.98	A	5 times out of 5 instances
4. I water the plants in my garden.	4.23	0.98	A	5 times out of 5 instances
5. Sowing seeds is my favorite part of gardening.	4.15	0.98	A	5 times out of 5 instances
6. I took care of the seeds and helped them grow into plants.	4.08	1.09	A	5 times out of 5 instances
7. I visit my assigned garden.	3.91	0.94	O	4 times out of 5 instances
8. I like moving compost to the garden.	3.72	1.15	O	4 times out of 5 instances
9. I prefer to keep my hands dirty and enjoy exploring other gardening activities.	3.38	1.49	S	3 times out of 5 instances
10. I harvested vegetables in my garden for our school feeding.	3.24	1.52	S	3 times out of 5 instances
Overall Mean	3.98	0.68	O	4 times out of 5 instances

Legend: 5 (4.21–5.00): Always – 5 times out of 5 instances; 4 (3.41–4.20): Often – 4 times out of 5 instances; 3 (2.61–3.40): Sometimes – 3 times out of 5 instances; 2 (1.81–2.60): Merely – 1–2 times out of 5 instances; 1 (1.00–1.80): None – Not at all.

Table 4 shows that the level of participation, the indicator which is said as I participated in gardening in school is the highest indicator with a mean of 4.43 which indicated that learners always participate in school gardening. This is followed by, I remove the weeds to keep my plants healthy with a mean of 4.34, which indicated that learners consistently engaged in weeding, showing an understanding of its importance for plant health. I enjoy taking care of the plants in my garden is reported with a mean of 4.29, and I watered the plants in my garden is a consistent activity with a mean of 4.23, reflecting regular participation in basic gardening tasks. The indicator, which is said as sowing seeds, is my favorite part of gardening, is highly favored with a mean of 4.15, suggesting learners enjoyed the initial stages of plant growth, and they actively participated in nurturing seeds with a mean of 4.08, showing involvement in the plant growth process. Learners frequently visited their assigned gardens with a mean of 3.91, garden visits are frequent but slightly less so than the core gardening tasks. I prefer to keep my hands clean and enjoy exploring other gardening activities has a mean of 3.38 which indicated that some learners are less enthusiastic about tasks perceived as dirty. I harvested vegetables in my garden for our school feeding has the lowest mean of 3.24, indicating lower engagement and varied levels of participation or interest. Participation of learners in School-based Gardening gained an average mean of 3.98 indicated that learners often participate in school gardening. This study investigated student engagement in school gardening activities using ten indicators measured on a quantitative scale. Results indicated high participation and positive attitudes towards core gardening tasks, including planting, weeding, watering, and seed care, with mean scores ranging from 4.18 to 4.49 QD=Always, QS=5/5. Moderate engagement was observed for garden visits and compost moving, with mean scores of 3.82 and 3.97 with QD=Often, QS=4/5. Lower engagement was noted for tasks involving dirt and harvesting for school feeding, with mean scores of 3.38 and 3.24 QD=Sometimes, QS=3/5, respectively, investigating student participation and attitudes in a school gardening program. A survey of ten statements, measured on a 5-point scale, revealed high levels of engagement in core gardening tasks such as weeding, watering, and sowing seeds, with mean scores consistently above 4.0. However, participation in activities like compost handling and harvesting was less frequent, with mean scores below 3.8. Learners also expressed a preference for keeping their hands clean. The overall mean engagement was positive, but significant variability existed in student responses to less favorable tasks. The results suggest that while learners enjoy fundamental gardening practices, efforts are needed to address concerns about messiness and to increase the participation of learners in the gardening program. The overall mean score of 3.98 with QD=Often, QS=4/5, with an overall standard deviation of 0.68, reflects a generally positive student attitude and frequent participation in school gardening. These findings suggest that while learners consistently engage in essential gardening tasks, specific activities involving dirt or harvesting may require additional strategies to enhance student involvement. According to Christensen and Wistoft (2019), gardening programs are instrumental in cultivating children's critical awareness of environmental problems and sparking their interest in nature. Participation in these programs leads to a significant increase in environmental awareness and strengthens their connection to the natural world.

Problem 2 explored the level of learners' perception on the usefulness of the School-Based Gardening program. Table 3 shows the learner's perception of the usefulness of a School-Based Gardening Program.

Table 5. *Level of Learner's Perception on the Usefulness of School-Based Gardening Program*

Statements	Mean	SD	QD	QS
1. It increased my awareness of the importance of consuming vegetables.	4.50	0.81	SA	Very Highly Perceived
2. School-based gardening helps in the School-Based Feeding Program.	4.36	0.97	SA	Very Highly Perceived
3. It improved my knowledge about different types of vegetables.	4.27	0.89	SA	Very Highly Perceived
4. It enhanced my teamwork and collaboration skills through gardening activities.	4.24	0.91	SA	Very Highly Perceived
5. It increased my interest in gardening and growing plants.	4.16	1.02	A	Highly Perceived
6. It provided me with opportunities for hands-on learning experiences.	4.16	1.02	A	Highly Perceived
7. It made me more aware of the benefits of locally sourced and	3.95	1.10	A	Highly Perceived



organic food.					
8. It positively influenced my eating habits by including more vegetables in my diet.	3.93	1.17	A	Highly Perceived	
9. It provided seeds and seedlings to the learners to be brought home for planting.	3.75	1.25	A	Highly Perceived	
Overall Mean	4.15	0.70	A	Highly Perceived	

Legend: 5 (4.21–5.00): Strongly Agree – Very Highly Perceived; 4 (3.41–4.20): Agree – Highly Perceived; 3 (2.61–3.40): Moderately Agree – Moderately Perceived; 2 (1.81–2.60): Disagree – Less Perceived; 1 (1.00–1.80): Strongly Disagree – Very Less Perceived.

Table 5 revealed that learners agreed that the school-based gardening program significantly increased their awareness of the importance of consuming vegetables, with a mean of 4.50, indicating consistent and strong positive responses. They also strongly perceived that the program supported the school-based feeding program with a mean of 4.36, suggesting a clear link between gardening and food provision. The program effectively improved students' knowledge of various vegetables with a mean of 4.27 and enhanced their teamwork and collaboration skills through gardening activities with a mean of 4.24, highlighting both educational and social benefits. Learners strongly agreed that the program improved their understanding of the process of growing vegetables, with a mean of 4.19, indicating successful hands-on learning.

The program also increased students' interest in gardening and provided valuable hands-on learning experiences with a mean of 4.16. Learners reported increased interest in gardening and growing plants with a mean of 4.16 and agreed that the program positively increased their awareness of the benefits of locally sourced and organic food with a mean of 3.95. It also agreed that the program positively influenced the eating habits by including more vegetables on the diet of the learners with a mean of 3.93. While still agreed, the provision of seeds and seedlings for home planting had the lowest mean (3.75), possibly indicating less consistent provision or impact. The perception of learners on the usefulness of the School-Based Gardening Program gained an average mean of 4.15, indicating that learners agreed that the School-based Gardening program has a positive impact on their knowledge, skills, and eating habits. This study assessed the perceived impact of a school-based gardening program using ten indicators measured on a quantitative scale. The data reveals a consistently positive perception of the school-based gardening program among students. Across all measured aspects, the program was deemed beneficial, with the lowest mean score still indicating positive reception.

Notably, the program effectively heightened students' awareness of vegetable consumption, expanded their knowledge of vegetable varieties, and fostered valuable teamwork skills. Learners also expressed appreciation for the hands-on learning opportunities provided, which contributed to a deeper understanding of the vegetable growing process.

Furthermore, the program appears to have positively influenced learners' eating habits and increased their awareness of locally sourced and organic food. The overall mean score of 4.15, coupled with the "Highly Perceived" qualitative and quantitative summaries, reinforces the program's strong positive impact. These findings suggest that school-based gardening effectively promotes nutritional awareness, practical skills, and positive dietary changes among learners. The study by Berezowitz et al. (2015) revealed that school gardens are a valuable tool for promoting healthy lifestyles among learners. Their research indicated that participation in garden programs led to increased fruit and vegetable intake and higher levels of physical activity.

According to Baldivia et al. (2014), school gardening activities positively impacted elementary students' healthy eating attitudes. The study revealed that hands-on gardening experiences increased learners' knowledge of fruits and vegetables, leading to a greater appreciation and desire to consume them. This suggests that school gardening is a valuable tool for promoting healthy eating habits and underscores the importance of hands-on learning. The study's findings can inform the development of school-based interventions aimed at improving children's nutrition.

Problem 3 sought to determine the level of practice of the gardening program in the home of the learners. Table 4 shows the level of practice of the gardening program in the homes of the learners.

Table 6. Level of Practice of the Gardening Program in the Home of the Learners

Statements	Mea n	SD	QD	QS
1. We have clean vegetables for cooking	4.36	1.04	O	Has garden and food supply throughout the year
2. The vegetables from our garden provided our food.	4.32	1.07	O	Has garden and food supply throughout the year
3. The produce from my garden contributes positively to my family's overall health and well-being.	4.28	1.07	O	Has garden and food supply throughout the year
4. We eat fresh, free from chemicals, safe with our own planted vegetables	4.27	1.04	O	Has garden and food supply throughout the year
5. Our garden provides a reliable source of food during times of scarcity.	4.17	1.11	O	Has garden and food supply throughout the year
6. Our family had a garden of vegetables in our backyard.	4.13	1.22	O	Has garden and food supply throughout the year
7. The garden has helped reduce our monthly grocery expenses.	4.01	1.26	VS	Has a garden and food supply that lasts 10 months
8. My family actively participates in gardening activities together.	3.88	1.19	VS	Has a garden and food supply that lasts 10 months



9. We always eat vegetables every day.	3.75	1.15	VS	Has a garden and food supply that lasts 10 months
10. We sell our vegetables for our needs.	3.07	1.49	S	Has a garden and food supply that lasts 8 months
Overall Mean	4.03	0.78	VS	Has a garden & food supply that lasts 10 months

Legend: 5 (4.21–5.00): Outstanding – Has garden & food supply throughout the year; 4 (3.41–4.20): Very Satisfactory – Has a garden & food supply that lasts 10 months; 3 (2.61–3.40): Satisfactory – Has a garden & food supply that lasts 8 months; 2 (1.81–2.60): Unsatisfactory – Has a garden & food supply that lasts 6 months; 1 (1.00–1.80): Poor – Has a garden & food supply that lasts 4 months.

Table 6 revealed that in the level of practice of the gardening program in the home of the learners, the indicator that said that we have clean vegetables for cooking is the highest indicator with a mean of 4.36, which indicated that learners generally agree that their gardens provide clean vegetables for cooking. This is followed by the vegetables from our garden, giving our food has a mean of 4.32, which indicated that learners perceive gardens is a significant food source. The indicator that the produce from my garden contributes positively to my family’s overall health and well-being was reported with a mean of 4.28, which indicated that learners recognize the health benefits of their garden produce. The indicator that said that we eat fresh, free from chemicals, safe with our own planted vegetables with a mean of 4.27, which indicated a strong emphasis on the safety and freshness of homegrown vegetables. The indicator our garden provides a reliable source of food during times of scarcity, with a mean of 4.17 seeing the garden as a reliable food source, especially during shortages, indicating its importance for food security. The indicator that our family had a garden of vegetables in our backyard with a mean of 4.13 is a significant portion of respondents confirms having a backyard vegetable garden. The garden has helped reduce our monthly grocery expenses indicator has a mean of 4.01 which learner perceive a reduction in grocery expenses due to their gardens, though with more variability in responses. My family actively participates in gardening activities together with a mean of 3.88, which indicates that family participation in gardening is moderate, suggesting it is not a consistently shared activity. The indicator which is said that We always eat vegetables every day with a mean of 3.75 indicating daily vegetable consumption is reported, but with variability, indicating it's not a universal practice. We sell our vegetables for our needs has the lowest mean of 3.07 indicating that selling garden produce is the least common activity, suggesting gardens are primarily for personal consumption. The practice of the gardening program in the home of the learners gained an average mean of 4.03, indicating that respondents positively perceive their backyard gardens, consistently emphasizing the provision of clean, safe, and nutritious food, but with less emphasis on selling produce. The perceived benefits and practices associated with backyard vegetable gardens using ten quantitative indicators. A survey, measured on a 5-point scale, revealed that respondents strongly value their gardens for providing clean, safe, and nutritious food. Gardens were also recognized as reliable sources of food, particularly during times of scarcity, and as contributors to improved family health and reduced grocery expenses. The majority of respondents reported having backyard gardens and utilizing them for personal food consumption. However, selling garden produce was less common, and family participation in gardening activities varied. The overall mean score indicated a positive perception of home gardening's benefits, highlighting its significance in providing food security and promoting healthy lifestyles. The findings suggest that home gardens play a crucial role in the respondents' food supply and well-being. According to Eigenbrod, C and Gruda, N. (2015), amidst the global food crisis and rising food costs, there’s a growing need to build resilient food systems and strengthen local food production to buffer against negative impacts, thereby improving food security and nutrition. Home gardens can play a significant role in this effort by boosting food production and enhancing livelihoods. Furthermore, Singh et al. (2020) highlight that home gardens improve food security and dietary diversity by utilizing underused plant varieties and can generate extra income through selling excess produce. Basically, home gardens help people eat better and live better, especially when they grow lots of different, useful plants.

Problem 4 determines if there is a significant relationship between the level of learners’ perception of the usefulness of the School-Based Gardening Program and the participation of learners in school-based gardening in schools. Table 5 shows the data on the relationship between the level of learners’ perception of the usefulness of the School-Based Gardening Program and the participation of learners in school-based gardening in schools.

Table 7. Significant Relationship between the Level of Learners' Perception of the Usefulness of School-Based Gardening Program and the Participation of Learners in School-Based Gardening in School

Variable	r-value	p	Remarks
Participation Perception	0.613**	0.000	Significant

***Correlation is significant at the 0.01 level (2-tailed).*

Table 7 statistical analysis revealed the relationship between learners' perception on the usefulness of School-Based Gardening Program and the participation of learners in school-based gardening in school. The Pearson correlation coefficient of 0.613 indicates a positive correlation between the participation of learners in School-Based Gardening in school and learners’ perception of the usefulness of the School-Based Gardening Program. This means that their participation in school-based gardening tends to increase learners' perception of the usefulness of the School-Based Gardening Program. The p-value of 0.000 is less than 0.01. This means that the correlation is statistically significant at the 0.01 level. In other words, there is a very low probability that this correlation occurred by chance. A 0.613 correlation indicates a moderately strong substantial relationship but not a perfect one. Other factors might also influence participation. This study investigated the relationship between learners' perception of the usefulness of a School-Based Gardening Program and their

participation in school-based gardening. Correlation analysis revealed a statistically significant positive relationship between these two variables, with a correlation coefficient of 0.613 and a p-value less than 0.01. This indicates that learners with a higher perceived usefulness of the program tend to participate more actively in school-based gardening activities. The mean scores for both perception and participation were relatively high, suggesting a generally positive attitude and involvement among learners. These findings highlight the importance of fostering positive perceptions of the program to encourage greater learner participation. The null hypothesis, stating there is no relationship between perceived usefulness and participation, was rejected. This demonstrates that learners who believe the school gardening program is valuable are significantly more likely to engage in gardening activities. Essentially, the more learners see the program as useful, the more they participate. According to Shafer (2018), school gardens provide learners with hands-on learning about food production, fostering an understanding of healthy eating, developing essential life skills, and increasing environmental awareness within the school community. Additionally, within the secure setting of a school garden, children gain access to a unique space for exploration. According to Bice et al. (2018), this experience enhances their comfort and engagement with the wider natural world. Beyond promoting physical activity, these gardens nurture vital life skills such as responsibility, teamwork, and communication. By immersing children in gardening, educators can foster a deeper appreciation for ecosystems, ultimately encouraging environmentally conscious actions through education on sustainability and biodiversity.

Problem 5 determines if there is a significant relationship between the level of participation in school-based gardening in schools and the level of practice of gardening in the homes of the learners. The findings are shown in Table 6.

Table 8. *Significant Relationship between the Level of Participation of School-Based Gardening in Schools and the Level of Practice of Gardening in the Homes of the Learners*

<i>Variable</i>	<i>r-value</i>	<i>p</i>	<i>Remarks</i>
Participation Implementation	0.603**	0.000	Significant

**Correlation is significant at the 0.01 level (2-tailed).

The research revealed the Pearson correlation coefficient of 0.603 indicates a positive correlation between the level of participation of School-Based Gardening in Schools and the level of practice of gardening in the homes of the learners. This means that as learners' participation in the School-Based Gardening Program increases, their level of practice of gardening in their homes also tends to increase, and vice versa. The p-value of 0.000 is less than 0.01. This means that the correlation is statistically significant at the 0.01 level. In other words, there is a very low probability that this correlation occurred by chance. There is a statistically significant positive correlation between the level of participation of School-Based Gardening in Schools and the level of practice of gardening in the homes of the learners. The correlation at 0.603 reveals a moderately strong and indicating a substantial relationship but not a perfect one. Other factors might also influence home gardening practices.

This study investigated the relationship between the level of participation of School-Based Gardening in schools and their level of practice of gardening in their homes. Correlation analysis revealed a statistically significant positive relationship between these two variables with a correlation coefficient of 0.603 and a p-value less than 0.01. This indicates that learners with a higher perceived participation in the program tend to practice gardening more frequently at home. These findings highlight the importance of fostering positive participation in the program to encourage greater learner practice of gardening in their homes. The null hypothesis, which stated that there is no significant relationship between the Level of participation of school-based gardening in schools and the level of practice of gardening in the homes of the learners, is rejected.

The results revealed the relationship between Learners' Participation in School-Based Gardening in schools and the Level of practice of Gardening in the homes of the learners, that there is a meaningful linear relationship. These findings suggest that the practice of Gardening in the homes of the learners is associated with the participation of learners in the School-Based Gardening Program in Schools. According to de Oliveira (2018 and Melo Herrera (2019, school gardens are great places for kids to learn about traditions, different cultures, and important lessons. These gardens function as experiential learning spaces where learners engage in hands-on activities, not just by reading books. When children engage in gardening at school, they discover methods for cultivating food using traditional practices, understand the significance of environmental stewardship, and explore the various ways different cultures utilize plants. Because they are learning these things in a practical way, they are more likely to remember them and want to try them at home. So, if kids are gardening at school might also start gardening at home or share what they have learned with their families. This makes gardening a learning experience that connects school and home, where everyone can learn and grow together.

In addition, Burt et al. (2016) found that to really make school gardens work well, two things are key: teachers using the garden in their lessons and getting the community involved. When teachers make gardening part of what kids learn in class, it is not just an extra activity, it becomes a real way to learn. Also, when parents and volunteers help, the garden gets the things it needs, and everyone feels like they have a part in making it successful.

Conclusions

Based on the findings, the following conclusions were arrived at:

School gardening is a highly effective educational tool, fostering knowledge, positive attitudes, and practical skills that students often apply at home to improve food security. Learners' perception of the gardens' value strongly drives their participation.

Generally, there was a significant relationship between learners' perception of the usefulness of the school-based gardening program and their participation. Therefore, the null hypothesis, which states that there is no significant relationship between the level of learners' perception of the usefulness of school-based gardening programs and the participation of learners in school-based gardening, is rejected.

Consequently, there is a significant relationship between the level of participation in school-based gardening in schools and the level of practice of gardening in the homes of the learners.

Therefore, the null hypothesis, states that there is no significant relationship between the level of participation in school-based gardening in schools and the level of practice of gardening in the homes of the learners. This indicates that while the program fosters a positive attitude towards gardening, additional elements, such as family involvement, resource availability, or personal interest, may play a more substantial role in determining the extent of home gardening activities.

Based on the findings and conclusions, the following recommendations are given.

The learners actively participate in all garden activities, learn through inquiry, and apply their knowledge at home while also providing feedback to enhance the program.

The educators shall integrate gardening into their lessons, empower learner's leadership, and cultivate strong ties with families.

The parents are essential in supporting home gardens, participating in school events, and promoting healthy eating.

The school leaders may prioritize these programs by providing resources, supporting teacher training, and building community partnerships.

The researchers may further explore the factors affecting home gardening, assess long-term impacts, evaluate interventions, and broaden the focus to include issues like food security and community growth.

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