

The Effectiveness of the Gulayan sa Paaralan Program as Perceived by Junior High School Students in Davao City

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Abstract

The Gulayan sa Paaralan program aligns with the United Nations' Sustainable Development Goals (SDGs). It contributes specifically to SDG 2: Zero Hunger by increasing food security and sustainable agricultural methods. The primary goal of this study was to evaluate the effectiveness of the Gulayan sa Paaralan program in achieving its stated goals as perceived by Junior High School students in Davao City. This descriptive-comparative study employed one hundred Junior High School Respondents selected using a random sampling method. The study used an adopted and modified Likert Scale questionnaire. The study results show that most respondents are females between fifteen and sixteen years old. Additionally, the results reveal that the Gulayan sa Paaralan Program has been effective in promoting a healthy lifestyle among Junior High school students. There was no significant difference in the perceived effectiveness of the Gulayan sa Paaralan Program when analyzed by sex and age. Regardless of sex and age, students perceived that the Gulayan sa Paaralan Program was effective. Studies investigating the support of the school personnel and the Department of Education to the program are recommended.

Keywords: Gulayan sa Paaralan; Junior High School Students; Effectiveness

1. Introduction

Education is critical in influencing future generations, not only academically but also in terms of character development and overall progress. In recent years, there has been an increasing emphasis on incorporating hands-on learning opportunities and encouraging students to live healthy lifestyles. The Gulayan sa Paaralan program, a school-based gardening program that promotes agricultural awareness, good eating habits, and environmental sustainability, has gained attention. However, the gap in this study is not explicitly mentioned. However, it could include a lack of previous research on the specific effects of the Gulayan sa Paaralan program in Davao City or a need for more comprehensive data on students' knowledge, attitudes, and behaviors related to agriculture, nutrition, and environmental sustainability. This study aims to evaluate the effectiveness of the Gulayan sa Paaralan program as perceived by junior high school students in Davao City schools.

On a global scale, the Gulayan sa Paaralan program is in line with the United Nations' Sustainable Development Goals (SDGs). It contributes specifically to SDG 2: Zero Hunger by increasing food security and sustainable agricultural methods. By teaching children about gardening, nutrition, and the value of fresh produce, the program equips them to make informed food choices, ultimately contributing to a better and more sustainable future.

On a national level, the Gulayan sa Paaralan program assists the Philippines in attaining its national development objectives. It is consistent with the K–12 Basic Education Program of the Department of Education, which promotes the development of 21st-century skills and holistic education. The program improves students' academic learning while boosting their physical, social, and environmental awareness by incorporating gardening activities into the curriculum. Furthermore, it supports the Department of Agriculture's endeavors to increase agricultural production, food sufficiency, and rural development.

The Gulayan sa Paaralan program has notable local advantages, particularly in Davao City. Davao City is known for its agricultural economy, and the program enables students to connect with their roots and better grasp the region's agricultural methods. Furthermore, by integrating students, teachers, parents, and local stakeholders in the planting and upkeep of the school gardens, the program promotes community participation. This collaborative method promotes community relationships, instills pride, and improves environmental stewardship in the local context.

The primary goal of this study is to evaluate the effectiveness of the Gulayan sa Paaralan program in achieving its stated goals as perceived by Junior High School students in Davao City. The study's specific goal is to investigate the level of students' awareness and understanding of the program, their level of participation and engagement, their perceived benefits, and any ideas for program enhancement. The study endeavors to provide beneficial information into the program's impact on student's knowledge, attitudes, and behaviors linked to agriculture, nutrition, and environmental sustainability by evaluating these aspects.

The research findings can be used to evaluate and enhance programs, allowing educational institutions and policymakers to make informed decisions on the implementation and continuation of the Gulayan sa Paaralan program. Furthermore, the research can contribute to a broader understanding of the function of school-based gardening programs for advancing sustainable development education and cultivating healthy lifestyles among students.

2. Statement of Problem

This study aimed to assess the effectiveness of the Gulayan sa Paaralan program implementation as perceived by Junior High School students in one of Davao City Region XI schools. The specific objectives of this study are as follows:

1. What is the demographic profile of the students in terms of:

- 1.1 sex
- 1.2 age

2. What is the level of effectiveness of the Gulayan sa Paaralan program as perceived by Junior High School students?

3. Is there a significant difference in the effectiveness of the implementation of the Gulayan sa Paaralan program as perceived by Junior High School students when analyzed according to their demographic profile?

2.1 Null Hypothesis

There is no significant difference in the effectiveness of the implementation of the Gulayan sa Paaralan program as perceived by Junior High School students when analyzed according to their demographic profile.

3. Review of Related Literature

School-based gardening programs have received much attention as effective interventions to promote healthy eating habits and improve nutrition among school-age children. (Franciscato, S. et al., 2019) These programs frequently involve the establishment of vegetable gardens within school grounds, giving students hands-on experience growing and cultivating plants. One such program is the Gulayan sa

Paaralan Program, which intends to integrate gardening activities into the curriculum and encourage sustainable agriculture practices among students (Ibaez et al., 2023).

The Gulayan sa Paaralan program is a joint initiative of the Departments of Education and Agriculture aimed at reducing poverty and addressing malnutrition in the Philippines (Ibañez, Jr. et al., 2023). The “Gulayan sa Paaralan” (GP) was a modest replication of the “Gulayan ng Masa” (GM) and served as one of the best practices of TES – created a vital contribution to its feeding program. Exasperation with the inimical attitude shown among the TES-GP’s stakeholders resulted in the garden’s minimum involvement, insufficient landscaping and garden fixtures, no proper arrangement and classification of vegetables according to the specified garden models indicated no discouragement (Inocian et al.; L. M., 2015).

Numerous studies have emphasized the beneficial effects of school-based gardening initiatives on students' dietary status. Students who took part in a school gardening program consumed more fruits and vegetables than those who did not (Smith et al., 2017). Children who participated in gardening activities demonstrated higher nutrition knowledge and healthier eating habits (Morris J et al., 2000). The Gulayan sa Paaralan Program offers educational opportunities to increase children's awareness of nutrition and food literacy in addition to giving them access to fresh vegetables. Students gain knowledge of the nutritional worth of various fruits and vegetables, the significance of a balanced diet, and the advantages of sustainable agriculture via practical experiences in planting, producing, and harvesting crops (Blair, 2009). Students are given the tools they need to make wise food decisions and create wholesome eating habits thanks to this information. These results imply that by increasing students' access to fresh, locally grown vegetables, the Gulayan sa Paaralan Program may help to improve their nutritional status.

The Gulayan sa Paaralan Program provides students with a number of nutritional advantages. The program encourages healthy eating habits and improves students' general well-being by increasing access to fresh and nourishing food, enhancing dietary diversity and nutrient consumption, enhancing nutrition awareness, and having a beneficial influence on nutritional status.

School-based gardening initiatives have the potential to improve academic achievement and cognitive development in addition to providing nutritional advantages. Students who participated in gardening activities showed improved science accomplishment, environmental literacy, and problem-solving abilities (Wells et al., 2018). In a similar vein, Blair's 2009 study found that gardening activities were linked to better cognitive skills, such as attention and memory. These results imply that the Gulayan sa Paaralan Program may improve academic performance among junior high school learners in addition to encouraging healthier eating.

The Gulayan sa Paaralan Program has a strong emphasis on sustainability and community involvement, which are essential elements for the accomplishment and long-term viability of school-based gardening programs. Community involvement is essential for school gardening projects to be successful and last. Schools, students, teachers, parents, neighborhood farmers, and other community members must work together actively. The Gulayan sa Paaralan Program's long-term viability is supported through community engagement, which generates a sense of ownership and a supportive environment (Ozer et al., 2016). Participating in the community in school gardening initiatives offers a chance for information and skill exchange. Local farmers and agricultural professionals may educate students, teachers, and parents about sustainable agriculture practices, gardening methods, and local food systems by sharing their knowledge and expertise (Hale et al., 2014). A crucial element of the Gulayan sa Paaralan Program is community involvement. The program can encourage information sharing, social cohesion, and the advancement of local food systems by including a variety of stakeholders, such as neighborhood farmers, parents, and community organizations. Issues relating to scarce resources, training, and communication must be resolved to ensure the success and long-term sustainability of community participation efforts within the program.

The Gulayan sa Paaralan has several benefits but also faces specific challenges and limitations (Velza J. et al., 2023). One of the primary challenges of the Gulayan sa Paaralan Program is the availability of limited resources and funding (Ibañez et al., 2023). Funding is needed to establish and upkeep school gardens in the form of supplies, equipment, seeds, and irrigation systems. It may be challenging to sustain and expand the initiative in more schools if insufficient money can limit the program's scope and impact.

The Gulayan sa Paaralan Program cannot function without the assistance of teachers and other stakeholders (Inocian et al., 2015). However, it is possible that a lot of teachers and stakeholders lack the requisite expertise in sustainable agricultural methods or specialized training in gardening. The program's execution may be hampered by a lack of chances for continued professional development.

Maintenance and sustainability are also one of the challenges and limitations. A crucial problem is ensuring the Gulayan sa Paaralan Program's long-term viability. Regular upkeep of school gardens is necessary, including weeding, watering, controlling pests, and soil care. Without proper upkeep and continued assistance, the gardens may eventually become unproductive or neglected, lessening the benefit of the program. It may be difficult to systematically assess and monitor the effectiveness and impact of the Gulayan sa Paaralan Program. It may be challenging to evaluate the program's outcomes, find areas for development, and show its overall efficacy in the absence of reliable monitoring and evaluation tools.

Although these difficulties exist, it is crucial to remember that many can be overcome with strategic planning, cooperation with pertinent parties, improved funding support, continued teacher preparation, and efficient monitoring and evaluation mechanisms. Overcoming these obstacles can aid in maximizing the Gulayan sa Paaralan Program's effect and sustainability.

4. Research Design and Methodology

4.1. Population/Respondents

The respondents of the study were Junior High School students. The researcher will use a random sampling technique, or it is also called probability sampling. West (2016) mentioned in his study regarding simple random sampling that the most basic method of sampling is 'simple random sampling,' where each and every member of a population has the same probability of being included in the sample and where all possible samples of a given size have the same chance of selection. The researcher aims to select 100 respondents. In this study, the researchers utilized a quantitative-descriptive design. Chiang (2015) In an overview of non-experimental research does not require manipulation of an independent variable and thus does not require intervention or treatment.

Several ethical issues were extensively addressed in this study. First, all participants provided informed consent, ensuring their voluntary involvement, complete awareness of the research objectives, and the freedom to withdraw at any time without consequence. Confidentiality was strictly enforced, with all data concealed and securely kept, ensuring participants' privacy. Furthermore, prospective risks and advantages were extensively analyzed, reducing harm and optimizing the study's potential benefits. Furthermore, the study followed the principles of beneficence and nonmaleficence, aiming to increase well-being while avoiding unnecessary harm. Finally, the research design and methods met a high scientific standard, confirming the findings' validity and trustworthiness. This study aims to contribute to knowledge while respecting the welfare and rights of its participants by adhering to these ethical issues.

4.2. Data Gathering Procedure

The researchers are undertaking a comprehensive evaluation of the Gulayan sa Paaralan program to determine its effectiveness among respondents with diverse demographic profiles, with a specific focus on age groups and sex. Additionally, the study aims to identify any significant difference in the program's effectiveness based on these demographic variables. To accomplish these objectives, the researchers administered a survey questionnaire to 100 participants from selected schools in Davao City. The survey was conducted using a secure and anonymous Google Form link, ensuring each respondent's privacy. This approach was particularly crucial as a significant portion of the participants are minors, thereby prioritizing their confidentiality and protection. By utilizing this method, the researchers conveniently gathered and analyzed data on the students' perspectives regarding the Gulayan sa Paaralan Program, enabling a robust assessment of its impact while respecting the privacy of the participants involved.

4.3. Data Gathering Instrument

In this study, the researchers have designed a Likert-type questionnaire to comprehensively gather essential information about the effectiveness of the Gulayan sa Paaralan Program as perceived by the Junior High School students. The questionnaire has been carefully structured into two distinct parts, each

serving a specific purpose. It has passed the reliability test using Cronbach's alpha with a score of 0.81, thus proving reliable.

The first part of the questionnaire is dedicated to gathering crucial data on the demographic profile of the respondents, specifically focusing on sex and age. This will enable the researchers to analyze how different age groups and sex perceive and engage with the Gulayan sa Paaralan Program, providing valuable insights into its impact on diverse segments of the population.

The second part of the questionnaire is specifically designed to delve into the various dimensions of the Gulayan sa Paaralan Program's effectiveness as perceived by the respondents.

By utilizing this Likert-type questionnaire as a research instrument, the researchers aim to gather comprehensive and meaningful data, enabling them to delve deeper into the effectiveness as perceived by the Junior High School students of the Gulayan sa Paaralan program.

5. Results and Discussions

5.1 Demographic Profile

Table 1 shows the result in the respondents' demographic profile regarding sex. Out of 100 respondents, 47, 47%, were male respondents, and 53, 53%, were female respondents. This implied that most of the group of respondents were female.

Table 1. Demographic Profile of Junior High School Students in Terms of Sex

Sex	Frequency	Percentage
Male	47	47%
Female	53	53%
Total	100	100%

Table 2 shows the result in the respondents' demographic profile regarding age. Out of 100 respondents, 54 with 54% were 13-14, 42 with 42% were 15-16, and 4 with 4% were 17 and above. This implied that the majority of the group of respondents were aged 13-14.

Table 2. Demographic Profile of Junior High School Students in Terms of Age

Age	Frequency	Percentage
13 to 14	54	54%
15 to 16	42	42%
17 and above	4	4%
Total	100	100%

5.2 Program's Level of Effectiveness

Table 3 shows the result of the effectiveness of the Gulayan sa Paaralan Program as perceived by Junior High School students in one of the schools in Davao City.

It reveals that the statement "The Gulayan sa Paaralan Program has been effective in promoting a healthy lifestyle among junior high school students." obtained the highest mean value among the eleven (11) statements ($\bar{X}=4.04$, $SD=1.02$), which is described as "high." Consequently, the statement "The Gulayan sa Paaralan Program has provided me with opportunities for hands-on learning experiences." obtained the lowest mean value among the eleven (11) statements ($\bar{X}=3.53$, $SD=1.05$), which is described as "high." It further reveals that the overall mean value on the level of effectiveness of the Gulayan sa Paaralan Program as perceived by Junior High School Students is 3.80 ($SD=0.91$), which is described as "high."

Table 3. The Level of Effectiveness of Gulayan sa Paaralan as Perceived by Junior High School Students

Statements	Mean	SD	Descriptive Level
1. The Gulayan sa Paaralan Program has increased my awareness of the importance of consuming vegetables.	3.9	1.20	High
2. The Gulayan sa Paaralan Program has improved my knowledge about different types of vegetables.	3.88	1.10	High
3. The Gulayan sa Paaralan Program has positively influenced my eating habits by including more vegetables in my diet.	3.82	0.99	High
4. The Gulayan sa Paaralan Program has increased my interest in gardening and growing plants.	3.73	1.03	High
5. The Gulayan sa Paaralan Program has made me more aware of the benefits of locally sourced and organic food.	3.81	1.15	High
6. The Gulayan sa Paaralan Program has improved my understanding of the process of growing vegetables.	3.83	1.03	High
7. The Gulayan sa Paaralan Program has enhanced my teamwork and collaboration skills through gardening activities.	3.80	0.98	High
8. The Gulayan sa Paaralan Program has positively impacted my overall well-being and health.	3.67	1.01	High
9. The Gulayan sa Paaralan Program has provided me with opportunities for hands-on learning experiences.	3.53	1.05	High
10. The Gulayan sa Paaralan Program has encouraged me to share my knowledge about gardening and healthy eating with others.	3.78	1.04	High
11. The Gulayan sa Paaralan Program has been effective in promoting a healthy lifestyle among junior high school students.	4.04	1.02	High
Overall Mean	3.80	0.91	High

This means that the respondents considered that the Gulayan sa Paaralan Program has been effective in promoting a healthy lifestyle to them. On the other hand, they considered that the Gulayan sa Paaralan Program had provided them with opportunities for hands-on learning. This implies that the Gulayan sa Paaralan Program has been effective as perceived by Junior High School students.

The finding is supported by Codilla, Jr. et al. (2022). School gardens are an excellent approach to teaching children about nutrition by allowing them to connect the dots between growing food and eating a healthy diet. According to Shafer (2018), gardens in school give students a real-time look at how food is grown. Children are expected to eat more fruits and vegetables When they are involved with school gardening activities and school farming. These children are willing to eat and cook more fruits and vegetables and demonstrate improved behavior outside and, in the classroom, (Codilla et al., 2022).

Moreover, the students will also have the opportunity to learn how to harvest appropriately the vegetables they have cultivated (Chan et al., 2022). Regarding the benefits of the adaptation of Gulayan sa Paaralan, it was found that the hands-on learning experiences, nutritional knowledge, and an additional source of livelihood are perceived as high (Codilla Jr. et al., 2022).

5.3 Significant Difference in the Effectiveness of Gulayan sa Paaralan when Analyzed According to Demographic Profile

Presented in Table 4 is the test of the difference in the effectiveness of Gulayan sa Paaralan as perceived by junior high school students. The significance of the difference in effectiveness was analyzed based on the respondents' sex and age.

Table 4. Test of Difference of the Effectiveness of Gulayan sa Paaralan as Perceived by Junior High School Students when analyzed according to Demographic Profile

		Male	Female	t-value	p-value	Remarks
SEX	Effectiveness of Gulayan sa Paaralan	3.644	3.935	1.603	0.112	Not Significant

		13-14	15-16	17 & above	F-value	p-value	Remarks	292
AGE	Adversity Quotient	3.842	3.719	4.068	0.394	0.675	Not Significant	

The mean score of the perception of effectiveness for males is 3.644, and for females is 3.935. The computed t-value is 1.603, with a corresponding p-value of 0.112. Since the computed p-value is greater than the 0.05 level of significance, then there is no sufficient evidence to reject the null hypothesis. This means that the respondents have similar perceptions of the effectiveness of the Gulayan sa Paaralan regardless of their sex. Meanwhile, in comparing the perception of effectiveness in terms of age, the computed mean value for the respondents whose age is 13-14 years old is 3.842, for 15-16 years old is 3.719, and for 17 years old and above is 4.068. The computed F-value is 0.394, with a p-value of 0.675. Since the p-value is greater than the 0.05 level of significance, then there is no sufficient evidence to reject the null hypothesis. This implies that regardless of age, the respondents have the same perception of the effectiveness of the Gulayan sa Paaralan.

6. Conclusion

Based on the analysis conducted on the available data, the following conclusions can be drawn:

- Female respondents were more engaged in the Gulayan sa Paaralan Program compared to male respondents.
- The Gulayan sa Paaralan program is effective as perceived by Junior High School students in Davao City.
- The study has failed to reject the null hypothesis. Therefore, there is no significant difference in the perception of the effectiveness of the Gulayan sa Paaralan when compared according to the sex and age of Junior High School students.

7. Recommendations

The study findings provide several recommendations for future research:

- It is suggested that the statements regarding the impact of the Gulayan sa Paaralan Program on students' awareness of vegetable consumption, knowledge about different types of vegetables, and awareness of the benefits of locally sourced and organic food should be further elaborated. Teachers and school announcements should provide additional explanations to ensure students grasp the significance of these statements.
- School administrators and teachers can utilize this study to improve the program's promotion and enhance students' engagement, awareness, and knowledge of its importance.
- The Department of Education should establish regular follow-up procedures in each school to monitor the implementation of the Gulayan sa Paaralan Program. This will contribute to gathering more comprehensive data on students' knowledge, attitudes, and behaviors related to agriculture, nutrition, and environmental sustainability.
- Students can view this study as supplementary information to learn and comprehend the importance of maintaining a healthy lifestyle through the Gulayan sa Paaralan program.

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