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SUSTAINABLE PRACTICES EMPLOYED BY ISAP: A BASIS FOR STRENGTHENING GREEN BUILDING PLACES

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ABSTRACT

This study rigorously examines the sustainable practices implemented by the International School of Asia and the Pacific (ISAP) to fortify its commitment to Green Building Places. Focused on six key aspects—energy conservation, waste reduction, responsible water use, climate-friendly purchasing, durable design, and eco-friendly materials—the research encompasses 366 respondents, comprising 332 students and 34 employees. Employing robust statistical methods such as Frequency Count, Weighted Mean, Independent Sample T-Test, One-Way ANOVA, and Regression Analysis with a descriptive and inferential design of research the findings underscore the positive impact of ISAP's sustainable initiatives, fostering environmentally sound and resilient structures. The study found notable differences in the evaluation of sustainable practices between students and employees at the International School of Asia and the Pacific. Specifically, variations were observed in waste reduction, responsible water use, climate-friendly purchasing, durable and maintenance design, and eco-friendly materials. The choice of courses taken by students greatly influenced their assessment, particularly in the area of responsible water use. There were no significant differences in the evaluation of sustainable practices among employee-respondents, regardless of their profile factors. However, no notable disparities were found in the assessment of sustainable practices based on their profile variables. The research contributes significantly to advancing knowledge in energy conservation, waste reduction, responsible water use, climate-friendly purchasing, durable design, and eco-friendly materials, thereby promoting sustainable development within the realm of green building projects.

Key words: *Sustainable Practices, Energy Conservation, Waste Reduction, Responsible Water Use, Climate-Friendly Purchasing*

INTRODUCTION

Sustainable practices are things we can do to help our environment develop with creating in every one of the ways that our people in the future have every one of the assets given commonly to satisfy their necessities. The definition of sustainable is something that can be preceded or a practice that keeps a condition without hurting the environment. Sustainable practices support ecological,

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human, and economic health and vitality. According to UCLA Sustainability Committee 2023, sustainability, in essence, pertains to the well-being of future generations and the legacy we will bestow upon them. Energy efficiency as a technical performance of energy conversion and consuming devices and building materials; Energy conservation generally includes actions to reduce the amount of energy according to EIA, 2022, states that, installing energy-efficient lights is an example of an energy-efficient measure, while shutting them off when not needed, either manually or with timers or motion sensor switches, is an energy conservation measure; Waste reduction reduces waste by using less material in the first place such as using both sides of a sheet of paper, using ceramic mugs instead of disposable cups, or buying in bulk rather than individually packaged items; acquiring goods and services that emit fewer greenhouse gases compared to similar alternatives that fulfill the same purpose as example of climate-friendly purchasing; and. Sustainable consumption are just few examples of sustainable practices employed to strengthen green building places in every establishment. In the broadest sense, sustainability refers to the ability to maintain or support a process continuously over time. According to Mollenkamp, 2023, sustainability in economic and policy contexts, aims to avert the exhaustion of natural or physical resources, ensuring their long-term availability. Thus, Assessing sustainable practices can pose challenges such as measuring long-term impacts, defining standardized criteria, accounting for diverse contexts, and addressing potential green washing, where companies may exaggerate their environmental efforts. This lead the researcher to pursue assessing the sustainable practices employed in International School of Asia and the Pacific particularly with its energy conservation, waste reduction, responsible water use, climate friendly purchasing, durable and maintainable designs and eco-friendly material to provide evaluation based on how employees and students perceived with its sustainable practices to be used as their basis in formulating their policy and offer insights and suggestions for the improvement of any sustainable practices in ISAP.

METHODOLOGY

Research design

The researchers used a descriptive and inferential design of research. Descriptive research design is a type of study that tries to collect data in order to describe a population, situation and phenomenon in a methodical way. To do this, the researchers collected the data needed for this study by making a structured questionnaire. Inferential statistics is highly dependent on sample data that would be both accurate and representative of the entire population. This study used descriptive and inferential design to measure what the objectives want to describe or measure data of which can be generated by the use of statistical tools. It depicts the respondents in accurate way and describes people who are part of the study which are the students and employees of Isap. Respondents of the Study, the respondents of this study composed of a total of 366 which are 332 from the students of the Isap and 34 of the employees of Isap who are currently studying and working at Isap. In this research, the researchers used stratified sampling which is the method of sampling from a population which can be petitioned in to subpopulation in statistical surveys to select respondents from the population.

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Data Gathering Tool

A questionnaire of two parts was given in the gathering of data. The first part of the questionnaire is about the profile of the respondents as to their age, sex, course/ year in service, department and HEA. The second part was consisted of statements regarding to The Sustainable Practices Employed By Isap A Basis For Strengthening Green Building Place. This part consists of ten statements. Each statement must be rated on how much he or she agrees with it using a five point scale: (1) strongly disagree, (2) disagree, (3) agree (4) strongly agree,. It should take most respondents 5-8 minutes to complete answering the questionnaire. All information gathered was treated with appropriate statistical tools to answer the statement of the problem.

Data Gathering Procedure

To collect the data needed in this study, the following steps were followed by the researchers. First, the communication letter was signed by the concerned authorities in conducting this research, the researchers sought permission for approval to float the prepared questionnaire in gathering data from the respondents. The questionnaire was presented and distributed to the participants. Tabulate all the results and analyze the information to determine which answer the best represented to each of the questions. Last, all the gathered data were analyzed and interpreted by the researchers to make the data easier to understand.

Data Analysis

For the researchers to further interpret the gathered data, the following statistical tools were used. Frequency and Count Percentage. This statistical tool was used to determine the exact number of the respondents in terms of their age, sex, course, department and highest educational attainment. Weighted Mean. This was used to determine the assessment of the respondents in the sustainable practices employed by ISAP. ANOVA- This is used to test the significant difference of the assessment of the sustainable practices employed by ISAP when respondents are grouped according to their age, sex, course, department, years in service and highest educational attainment.

RESULTS AND DISCUSSIONS

TABLE 1.1 **MEAN AND DESCRIPTIVE INTERPRETATION IN TERMS OF ENERGY CONSERVATION AND EFFICIENCY**

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STATEMENTS	MEAN	DESCRIPTION
1. ISAP encourages students and employees to turn off the lights when leaving their classroom.	3.41	STRONGLY AGREE
2. ISAP practices unplugging appliances when they're not in use.	3.36	STRONGLY AGREE
3. ISAP encourages students and employers who live near the school to ride a bike or walk when going to their classes.	2.82	AGREE
4. ISAP encourages students to practice recycling to minimize overall waste.	3.09	AGREE
5. ISAP generates their own electricity by installing solar panels.	2.58	AGREE
CATEGORICAL MEAN	3.05	AGREE

Table 1.1, states that, in terms of energy conservation and efficiency assessment of the respondents, we have a categorical mean of 3.05 which is "Agree". The statement, "ISAP encourages students and employees to turn off the lights when leaving their classroom" has the highest mean of 3.41 with a description of "Strongly Agree" while the statement, "ISAP generates their own electricity by installing solar panels" has the lowest mean of 2.58 with a description of "Agree". The result implies that the energy conservation and efficiency practices of Isap are being employ as assessed by the respondents. This is congruent with the study conducted by Michael and Samantha's (2017), that the significance of energy conservation as a pivotal element in fostering a sustainable environment. Notably, their study emphasizes a tangible illustration of this concept: the simple yet impactful act of turning off lights upon leaving a classroom. This practice, as highlighted in their work, serves as a microcosm of broader energy conservation efforts, contributing to the overarching goal of sustainability within educational environments.

TABLE 1.2 **MEAN AND DESCRIPTIVE INTERPRETATION IN TERMS OF WASTE REDUCTION**

STATEMENTS	MEAN	DESCRIPTION
1. ISAP reduce trash disposal and save raw materials	2.96	AGREE
2. ISAP implement tray less in the cafeteria for proper waste disposal	3.07	AGREE
3. ISAP practicing recycling, or physical reprocessing, which is the method for getting rid of inorganic waste like plastic, glass, and metals.	3.07	AGREE
4. ISAP implements the 3'Rs for proper waste disposal	3.12	AGREE
5. ISAP practices proper waste segregation	3.17	AGREE
CATEGORICAL MEAN	**3.08**	**AGREE**

Table 1.2, states that, in terms of waste reduction assessment of the respondents, we have a categorical mean of 3.08 which is "Agree". The statement, "ISAP practices proper waste segregation" has the highest mean of 3.17 with a description of "Agree" while the statement "ISAP reduces trash disposal and saves raw materials" has the lowest mean of 2.96 with a description of "Agree". The above

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statement implies that, most of the respondents had a positive perception of ISAP in regards to waste reduction and the proper waste segregation. In resonance with Tey's seminal work from 2013, his study emphasizes the critical importance of evaluating the current waste management system as a foundational step toward achieving sustainable waste management practices. Tey underscores the need for a comprehensive understanding of the existing system, suggesting that this assessment serves as a precursor for making essential adjustments and improvements. By integrating Tey's insights into our study framework at the International School of Asia and the Pacific, we aim to adopt a proactive approach in enhancing waste management strategies, aligning with the broader goal of promoting sustainability within the educational infrastructure.

TABLE 1.3 **MEAN AND DESCRIPTIVE INTERPRETATION IN TERMS OF RESPONSIBLE WATER USE**

STATEMENT	MEAN	DESCRIPTION
1. ISAP provides reliable access to clean water	2.92	AGREE
2. ISAP bring solutions to the table with advanced practices to maximize our limited water resource	2.89	AGREE
3. ISAP use water consumption management to achieve sustainability as is it used in many ways in our everyday life.	2.87	AGREE
4. ISAP recycled water (rainwaters) reuses for nonpotable purposes such as toilet flushing	2.80	AGREE
5. ISAP provides water in more ways than just quenching thirst	2.83	AGREE
CATEGORICAL MEAN	**2.86**	**AGREE**

Table 1.3, states that, in terms of responsible water use assessment of the respondents, we have a categorical mean of 2.86 which is "Agree". The statement, "ISAP provides reliable access to clean water" has the highest mean of 2.92 with a description of "Agree" while the statement, "ISAP recycled water (rainwater) reuses for non-potable purposes such as toilet flushing" has the lowest mean of 2.80 with a description of "Agree". The above statement implies that, most of the respondents agree that ISAP is involved in responsible water use. Building upon Tineke's influential study from 2011, her research underscores the innovative approach of adopting sustainable water usage methods as a pivotal strategy for achieving overall sustainability. Tineke's insights emphasize the transformative potential of incorporating environmentally responsible water practices. Integrating her findings into our study at the International School of Asia and the Pacific, we aim to leverage this innovative perspective to enhance water usage methods, contributing significantly to our broader goal of fostering sustainability within the educational infrastructure.

TABLE 1.4 **MEAN AND DESCRIPTIVE INTERPRETATION IN TERMS OF CLIMATE FRIENDLY PURCHASING**

STATEMENT	MEAN	DESCRIPTION

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1. ISAP choose items that are long-lasting, durable, reusable, or refillable.	2.96	AGREE
2. ISAP increase the use and availability of products that are better for the environment.	2.95	AGREE
3. ISAP educate us, our vendors, and our customers about supporting locally produced goods and services.	3.04	AGREE
4. ISAP reduce or eliminate risks to worker and community health from the environment.	3.07	AGREE
5. ISAP concerns about reducing packaging waste	2.01	AGREE
CATEGORICAL MEAN	**3.00**	**AGREE**

Table 1.4, states that, in terms of climate-friendly purchasing assessment of the respondents, we have a categorical mean of 3.00 which is "Agree". The statement, "ISAP reduces and eliminates risks to worker and community health from the environment" has the highest mean of 3.07 with a description of "Agree" while the statement, "ISAP increases the use and availability of products that are better for the environment" has the lowest mean of 2.95 with a description of "Agree". The above statement implies that, most of the respondents strongly believe that ISAP effectively mitigates environmental risks to worker and community health. Expanding upon the significant findings of Liu, Kirie, and Paulino in 2018, their study underscores that engaging in climate-friendly purchasing practices not only aligns with environmental sustainability but also plays a crucial role in reducing and eliminating risks to workers and community health. By integrating their insights into our study framework at the International School of Asia and the Pacific, we recognize the interconnected benefits of climate-friendly purchasing, emphasizing its positive impact not only on environmental well-being but also on the health and safety of both workers and the surrounding community. This understanding guides our endeavor to promote.

TABLE 1.5 **MEAN AND DESCRIPTIVE INTERPRETATION IN TERMS OF DURABLE AND MAINTAINABLE DESIGN**

STATEMENTS	MEAN	DESCRIPTION
1. Practices good construction through protecting ecosystem.	3.00	AGREE
2. ISAP uses concrete pigment that turn concrete slabs into finished floors	2.92	AGREE
3. Providing health and safety working environment.	3.15	AGREE
4. Safety access for maintenance personnel to provide maintenance.	3.11	AGREE
5. ISAP use recycled and sustainable source material	3.02	AGREE
CATEGORICAL MEAN	**3.04**	**AGREE**

Table 1.5, states that, in terms of durable and maintenance design assessment of the respondents, we have a categorical mean of 3.04 which is "Agree". The statement, "Providing health and safety working environment" has the highest mean of 3.15 with a description of "Agree" while the statement, "ISAP uses concrete pigment that turns concrete slabs to finished floors" has the lowest mean of 2.92 with a description of "Agree". The above statement implies that, most of the respondents were into creating sustainable, safe, and durable green building environment. This is connected to the

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study of Tina, R., & Rutuse X., which states that, the construction of green building environment is through sustainable and healthy environment.

TABLE 1.6 MEAN AND DESCRIPTIVE INTERPRETATION IN TERMS OF ECO- FRIENDLY MATERIALS

STATEMENTS	MEAN	DESCRIPTION
1. ISAP provide segregation of solid waste materials	3.10	AGREE
2. ISAP provide bins for hazardous waste to avoid contamination	3.15	AGREE
3. ISAP requires efficient waste management practices and use eco-friendly Materials	3.12	AGREE
4. ISAP uses recyclable materials such as (paper, plastic, metal, wood)	3.10	AGREE
5. ISAP encourages students and employees to purchase products that is made from post consumers waste	3.01	AGREE
CATEGORICAL MEAN	**3.09**	**AGREE**

Table 1.6, states that, in terms of eco-friendly materials assessment of the respondents, we have a categorical mean of 3.09 which is "Agree". The statement, "ISAP provides bins for hazardous waste to avoid contamination" has the highest mean of 3.15 with a description of "Agree" while the statement, "ISAP encourages students and employees to purchase products that are made from post consumers waste" has the lowest mean of 3.01 with a description of "Agree". The above statement implies that, most of the respondents appreciate the effort of the institution when it comes to environmental management. This is connected to the study of Alaika, F., 2010, which states that, hazardous waste must be separated not to cause harmful effects.

TABLE 1 **TEST OF THE DIFFERENCE IN THE ASSESSMENT OF SUSTAINABLE PRACTICES EMPLOYED BY THE INTERNATIONAL SCHOOL OF ASIA AND THE PACIFIC**

VARIABLES		MEAN	t- value	p- value	DECISION
ENERGY CONSERVATION AND EFFICIENCY	STUDENT	3.0645	1.467	.143	NOT SIGNIFICANT
	EMPLOYEE	2.9294			
WASTE REDUCTION	STUDENT	**3.1151***	3.927	.000*	SIGNIFICANT
	EMPLOYEE	2.7118			

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RESPONSIBLE WATER USE	STUDENT	**2.8910***	2.755	.006*	SIGNIFICANT
	EMPLOYEE	2.5765			
CLIMATE FRIENDLY PURCHASING	STUDENT	**3.0331***	3.001	.003*	SIGNIFICANT
	EMPLOYEE	2.7235			
DURABLE AND MAINTAINABLE DESIGN	STUDENT	**3.0795***	4.057	.000*	SIGNIFICANT
	EMPLOYEE	2.6471			
ECO- FRIENDLY MATERIAL	STUDENT	**3.1259***	3.136	.002*	SIGNIFICANT
	EMPLOYEE	2.7882			

As shown in the table, there are significant difference on the assessment of the two groups of respondents towards the sustainable practices employed by ISAP including: waste reduction (p-value of .000), responsible water use(p-value of .006), climate friendly purchasing(p-value of .003), durable and maintainable design(p-value of .000) and eco-friendly material(p-value of .002) thus, the null hypothesis was rejected. This implies that students got the highest mean in which they assessed differently the practices of ISAP in attaining sustainability. This maybe because the employees are more oriented than the students as to their responsibility being employed by the institution. This result is congruent with the study of Romeo, H., 2017, which states that, positive orientation towards sustainability expressed highly favorable opinion.

TABLE 1 **PROPOSE ACTION PLAN FOR THE ASSESSMENT OF THE SUSTAINABLE PRACTICES EMPLOYED BY INTERNATIONAL SCHOOL: A BASIS FOR STRENGTHENING GREEN BUILDING PLACES.**

Title of the Program: Enhancing the quality of life one Bougainvillea at a time.

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Duration of the program: 1 day

The program Enhancing the quality of life one Bougainville at a time of the tourism management students of Isap aims to establish a sustainable garden of Bougainvillea plants, carefully maintained to serve both aesthetic and functional purposes.
These blooming beauties will not only enhance the ambiance of our institution but also serve as meaningful tokens for special occasions in the future. This initiative aligns seamlessly with our commitment to environmental consciousness and provides an opportunity for students to engage in hands-on learning experiences related to horticulture, landscaping, and sustainable practices.

General Objectives

This program aims achieve the vision of having an area that will be beautify and at the same time maintained by the tourism management department. The actions are made to engage the students as well as the employees to raise awareness on any sustainable practices.

SPECIFIC OBJECTIVE	ACTIVITY	TARGET OUTPUT	EVIDENCES
To beautify a certain area in the institution. To provide as a token for speakers in a specific program	Vlogging and blogging that talks about the area beautification of the institution	Explore new and better ways to use the bougainvillea	Meetings Sharing in social media Photo documentation

CONLUSION

In conclusion, the study reveals significant difference in the evaluation of sustainable practices implemented by the International School of Asia and the Pacific across student and employee participants. Specifically, significant distinctions exist in waste reduction, responsible water use, climate-friendly purchasing, durable and maintenance design, and eco-friendly materials. The choice of course undertaken by students plays a crucial role in determining their assessment, especially in areas such as responsible water use. Nevertheless, there were no notable disparities observed in the evaluation of sustainable practices among employee-respondents, regardless of their profile factors. However, no significant differences were found in the assessment of sustainable practices among employee-respondents based on their profile variables.

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RECOMMENDATIONS

This part displays proposals and suggestions coming from the researchers regarding the topic.

1. Analyze possible obstacles and suggest strategies for maximizing the effectiveness of the solar energy system.
2. Do consider the implementation of a thorough recycling program within ISAP in order to optimize waste reduction and encourage the reuse of raw materials. Perform an extensive cost-benefit analysis to assess the economic viability of adopting ISAP recycled water systems for toilet flushing.
3. Also consider including measures such as obtaining eco-friendly product certifications, advocating for sustainable methods in production, and educating consumers about the environmental advantages of ISAP-supported products.
4. To achieve the best outcomes in transforming concrete slabs into finished flooring, it is recommended to adhere to ISAP's prescribed rules for utilizing their concrete pigment. Ensure optimal results by carefully considering the proportions in which substances are mixed, the techniques used for application, and the processes employed for fixing.
5. To adhere to ISAP's dedication to sustainability, it is advisable to endorse environmentally friendly alternatives such recycled paper, notebooks, and office supplies. In addition, promoting awareness regarding the environmental advantages of utilizing items manufactured from post-consumer trash could enhance the involvement of students and employees in making ecologically mindful decisions.

REFERENCES

Ahhuy, A. A. L., Lapuz, L. W. M. G., Callores, L. R. F. G., TEJADA, M. A. M., & FONTANILLA, C. R. C. Responding to The Clients 'plea: The Research and Development Center's (RDC's) Satisfaction and Loyalty Survey. Research in Management and Social Sciences, ISSN, 2278-6236.

Fontanilla, R. C., & Guzman, C. R. (2023). The Quality of Online Learning Delivery and The Learning Management System of The Medical Colleges of Northern Philippines (MCNP) And International School of Asia and The Pacific (ISAP): A Correlational Study, The Seybold Report ISSN 1533-921, Vol. 18, 06.

TEJADA, M. A. M., & QUEROL, J. V. P. EXTENDING THE CAPACITY OF AN RFID TECHNOLOGY AND REAL TIME CLOCK IN CONTROLLING THE POWER DISTRIBUTION OF MCNP-ISAP. Fontanilla, R., Fontanilla Jr, R., Galadi, D., & Nano, A. (2023). A Comparative Evaluation of the Technical Education System of the Philippines and England: An Integrative Literature Review. Herculean Journal, 1(1).

https://www.researchgate.net/publication/317417995_Reducing_Electricity_Use_on_Campus_The_Use_of_Prompts_Feedback_and_Goal_Setting_to_Decrease_Excessive_Classroom_Lighting

https://www.researchgate.net/publication/377526389_Promoting_Integrated_and_Sustainable_Solid_Waste_Management_System_in_A_Developing_City_for_Public_Health_and_Cleaner_Environment

https://www.researchgate.net/publication/377860304_Sustainable_Water_Management_An_Integrated_Approach_to_Solving_the_Problems_of_Wastewater_Treatment

https://www.mdpi.com/2071-1050/15/22/15898

https://www.researchgate.net/publication/378303039_A_CONCEPTUAL_MODEL_FOR_THE_ADOPTION_OF_GREEN_BUILDING_TECHNOLOGY_IN_THE_CONSTRUCTION_INDUSTRY

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https://www.researchgate.net/publication/331702185_A_Case_Study_about_the_Improper_Waste_Disposal_in_Barangay_Mojon_Tampoy

https://www.researchgate.net/publication/322893558_Sustainability_Orientation_and_Entrepreneurship_Orientation_Is_There_a_Tradeoff_Relationship_between_Them