Green Management: Practices of Selected Agencies in Puerto Princesa City Towards Sustainability

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Abstract— This study describes the level of awareness and acceptance of four private and public agencies in the city of Puerto Princesa towards green management. Green management strategies are being employed by several companies in the hope of helping the environment and at the same time keeping their businesses working. Quantitative method of research was used. Mean was used to describe the level of awareness and acceptance of the respondents towards green practices as well as to describe the extent to which green management is practiced in the respondents' respective agencies. Analysis of Variance (ANOVA) was employed to test the difference among the agencies' level of awareness and acceptance towards green practices. All the respondent agencies were extremely aware of green management and showed positive feedbacks. There were no significant differences in the level of awareness among the respondent's agencies in the water/energy use and the waste management categories. There was a significant difference in the level of awareness in purchasing practices among the agencies.

Keywords— Waste management, energy use, green management, environment, sustainability.

INTRODUCTION

The present condition of the environment is not new to everybody. All of us know that in some parts of the world it is no longer healthy and in the brink of collapse. According to Rinkesh, our Mother Earth is currently facing a lot of environmental concerns. The environmental problems like global warming, acid rain, air pollution, urban sprawl, waste disposal, ozone layer depletion, water pollution, climate change and many more affect every human, animal and nation on this planet. Over the last few decades, the exploitation of our planet and degradation of our environment have gone up at an alarming rate.

Reducing harmful impacts to the environment is becoming a way of life for many people. This trend has also become very popular with companies as well (Whiting, n.d.) Many companies have already been implementing some measures to solve the present environmental problems. According to Lorette (n.d.), going green may seem to be the latest trend, but it is a trend with a variety of benefits for business owners. Applying green processes to the workplace creates a healthy environment for employees, reduces unnecessary waste and recognizes that businesses play in leading the way for social change.

Green management is seen as one of the solutions to present environmental problem. According to Whiting, green management is when a company does its best to minimize processes that harm the environment. Environmental issues are a company priority. Mindtools.com stated that green management is about becoming aware of how your behavior, working practices or production methods impact the environment, and making changes that reduce your environment "footprint" and make your business more sustainable.

Green management strategies are being employed by several companies in the hope of helping the environment and at the same time keeping their businesses working. There are direct and indirect benefits of green management strategies, these are: cost reductions that result by reducing or eliminating waste, reducing energy consumption, encouraging team-building programs that can improve company performance, incorporates "sustainability" to change corporate norms, rethinking long-held practices that can open doors to new profit and revenue opportunities, marketing the company's green management strategies can boost brand recognition and gain a competitive advantage in the market place.

In the Philippines, programs have been crafted and strategies have been adopted to increase environmental awareness among people and change their non-environment friendly practices to more friendly ones. Antonio (2014) mentioned that people are now becoming more environmentally- conscious, they are choosing and embracing greener lifestyle. Moreover, local government units (LGUs) are re-planning and redesigning their cities to make it more livable for a healthier community. Antonio further outlined four best green practices in the Philippines such as implementing laws and ordinances for the environment, having an efficient waste management system, creating sustainable public transportation system, and devoting more areas for green public space.

Having these thoughts in mind, determining the awareness and acceptance of Puerto Princesa City's agencies towards green management became an impetus for this study. Specifically, this study sought to explore the level of awareness and level of acceptance toward green management of some selected agencies in the City and determine the extent to which green management is practiced in their respective agencies.

This research sought to determine the level of awareness and acceptance of selected agencies towards green management. It sought to answer the questions of what is the level of awareness and acceptance of the selected agencies towards green management, are there significant differences in the levels of awareness and acceptance among the selected agencies towards green management and to which is the extent is green management practiced by the selected agencies.

METHODS

The respondents of the study were randomly selected from the agencies the New City Commercial Center (NCCC), Provincial Capitol, Puerto Princesa City School of Arts and Trade (PPSAT), and Sicsican National High School. Specifically, 20 from NCCC, 20 from the Provincial Government of Palawan, 11 from PPSAT and 10 from Sicsican National High School.

To answer the questions raised in the study, quantitative method of research was used. Mean was used to describe the level of awareness and acceptance of the respondents towards green practices as well as to describe the extent to which green management is practiced in the respondents' respective agencies. On the other hand, Analysis of Variance (ANOVA) was employed to test the difference among the agencies' level of awareness and acceptance towards green practices.

RESULTS AND DISCUSSION

1. Level of awareness

Table 1. Level of Awareness of the Selected Agencies Towards Green Management

Agency	Water/Energy Use	Qualitative Description	Waste Management	Qualitative Description	Purchasing Practices	Qualitative Description	Overall Mean	Qualitative Description
NCCC	4.52	Extremely Aware	4.73	Extremely Aware	4.33	Extremely Aware	4.53	Extremely Aware
Provincial Capitol	4.78	Extremely Aware	4.87	Extremely Aware	4.69	Extremely Aware	4.78	Extremely Aware
PPSAT	4.6	Extremely Aware	4.73	Extremely Aware	4.75	Extremely Aware	4.69	Extremely Aware
Sicsican National High School	4.8	Extremely Aware	4.76	Extremely Aware	4.93	Extremely Aware	4.83	Extremely Aware

Legend:

1.00-1.75 = Not at all aware

1.80-2.59 = Slightly aware

2.60-3.39= Somewhat aware

3.40-4.19= Moderately Aware

4.20-5.00= Extremely Aware

The table above shows the level of awareness of the selected agencies towards green management. It can be observed that the respondents from all four agencies are extremely aware of the green practices. A closer look at the table reveals that Sicsican National High School has the highest level of awareness among the four agencies in the energy/water use, waste management and purchasing practices categories and with an overall mean of 4.83, followed by the Provincial Capitol with an overall mean of 4.78, and then Puerto Princesa School of Arts and Trade with an overall mean of 4.69, and lastly the New City Commercial with an overall mean of 4.53. Thus, this implies that the selected agencies manifested extreme awareness in green management specifically in terms of water/energy use, waste management and purchasing practices.

2. Level of acceptance

Table 2. Level of Acceptance of the Selected Agencies Towards Green Management

Agency	Water/Energy Use	Qualitative Description	Waste Management	Qualitative Description	Purchasing Practices	Qualitative Description	Overall Mean	Qualitative Description
NCCC	4.6	Strongly Agree	4.77	Strongly Agree	4.46	Strongly Agree	4.61	Strongly Agree
Provincial Capitol	4.71	Strongly Agree	4.79	Strongly Agree	4.65	Strongly Agree	4.72	Strongly Agree

| PPSAT | 4.29 | Strongly Agree | 3.97 | Strongly Agree | 3.82 | Strongly Agree | 4.03 | Strongly Agree |
| Sicsican National High School | 4.79 | Strongly Agree | 4.77 | Strongly Agree | 4.95 | Strongly Agree | 4.84 | Strongly Agree |

Legend:

1.00-1.79 = Strongly agree

1.80-2.59 = Disagree

2.60-3.39= Neutral

3.40-4.19= Agree

4.20-5.00= Strongly Agree

It can be observed from Table 2 the respondents' level of acceptance is relatively high, with Sicsican National High school with an overall mean of 4.84, followed by the respondents from the Provincial Capitol having an overall mean of 4.72, then the New City Commercial Center with a mean of 4.61, all having a qualitative description of strongly agree. On the other hand, it can also be observed that the PPSAT got the lowest mean of 4.03 which is qualitatively described as "Agree". It is worth noting that this value stems from the lowest means the agency got under the waste management and purchasing practices categories. This implies that although all the selected agencies exhibited extreme awareness in green management, for one agency, however it no longer holds.

3. Signficant difference in the level of awareness

Table 3. Test of Difference on the Level of Awareness of Selected Agencies

Category	p – value	Interpretation
Water/energy use	0.0680	Not significant
Waste management	0.6339	Not significant
Purchasing practices	0.0046**	Significant

**Significant at 0.05 level of significance

The table above reveals if there are differences among the agencies' level of awareness. In the water/energy use category, the computed p-value is 0.0680 which is greater than the 0.05 level of significance. This signifies that there is no significant difference in the respondent agencies' level of awareness in the water/energy use. On the other hand, the p-value of the waste management category is 0.6339 which is again greater than 0.05 alpha level. This tells us that there is also no significant difference in the agencies' level of awareness in terms of waste management. It can further be gleaned from the table that the computed p-value for the purchasing practices is 0.0046 which is less than the 0.05 level of mignificance. This shows that there is a significant difference in the purchasing practices among the respondent agencies. It can be recalled that the agencies involved in the study comprised of private commercial, educational and government office. Hence, this difference in the level of

awareness in the purchasing practices can be attributed to the different nature of the selected agencies. This further implies that although all four agencies exhibited extreme awareness in all three categories, they differ significantly in their awareness in the purchasing practice.

4. Significant difference in the level of acceptance

Table 4. Test of Difference on the Level of Acceptance of Selected Agencies

Category	p – value	Interpretation
Water/energy use	0.14.83	Not significant
Waste management	0.0050**	Significant
Purchasing practices	0.0022**	Significant

**Significant at 0.05 level of significance

The table above shows the test of difference in the respondent agencies' level of acceptance in the three categories in terms of water/energy use. The table shows that the computed p-value is 0.1483 which is greater than 0.05 alpha level. This means that there is no significant difference in the level of acceptance among the agencies. This implies that the respondent agencies exhibit strong acceptance in terms of their respective agency's water/energy green practices. However, the computed p-value for the waste management and purchasing practices are 0.0050 and 0.0022, respectively. This means that there is a significant difference among the agencies' level of acceptance in terms of waste management and purchasing practices. Again, these differences may be attributed to the different nature of the agencies involved in the study.

5. Extent to which green management is being practiced by the selected agencies

Table 5. Extent of Practice of Selected Agencies Towards Green Management

Agency	Water/Energy Use	Qualitative Description	Waste Management	Qualitative Description	Purchasing Practices	Qualitative Description	Overall Mean	Qualitative Description
NCCC	4.3	Always	4.44	Always	4.2	Always	4.31	Always
Provincial Capitol	2.75	Sometimes	2.61	Sometimes	2.71	Sometimes	2.69	Sometimes
PPSAT	3.72	Often	3.67	Often	3.73	Often	3.71	Often
Sicsican National High School	4.78	Always	4.75	Always	4.98	Always	4.84	Always

Legend:

1.00-1.79 = Never

1.80-2.59 = Rarely

2.60-3.39= Sometimes

3.40-4.19= Often

4.20-5.00= Always

It can be gleaned from the table above that the Sisican National High School and NCCC got an overall mean of 4.84 and 4.31, respectively, which is qualitatively described as "Always". This means that the two agencies always practice green management. On the other hand, PPSAT practice green management often, as reflected by its overall mean of 3.71. Lastly, the Provincial Capitol got an overall mean of 2.69 which is qualitatively described as "sometimes". This means that the said agency does not often observe green management in their office practice. This implies that the different agencies have different extent of green practices.

CONCLUSION

The result of this study revealed that all the respondent agencies were extremely aware of green management. Meanwhile, NCCC, Provincial Capitol and Sicsican National High School showed strong agreement towards green management.

The test of difference on the level of awareness among the selected agencies revealed that there was no significant difference when it comes to water/energy use and waste management. However, there was a significant difference in the level of awareness among the agencies when it comes to purchasing practice. On the other hand, there was no significant difference in the level of acceptance in the water/energy category while in the waste management and purchasing practices categories, the respondent agencies showed significant differences among them. Lastly, the respondent agencies differed in their extent of practices towards green management.

Based on the results of the study, the four respondent agencies are extremely aware of green management. These agencies also showed agreement to green management. There were no significant differences in the level of awareness among the respondent's agencies in the water/energy use and the waste management categories. There was a significant difference in the level of awareness in purchasing practices among the agencies. There was no significant difference on the level of acceptance among the agencies in the water/energy use category, while the said agencies showed significant difference in the Waste Management and Purchasing practices categories.

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