

COMMUNITY EXTENSION SERVICE IN THE WASTE MANAGEMENT PRACTICES OF BRGY. WAWA RESIDENTS IN BATANGAS CITY

Jake M. Laguador¹, Leoncio B. Mandigma², Edwin Agena³

¹College of Engineering, ^{2,3}Lyceum International Maritime Academy Lyceum of The Philippines University, Batangas City, PHILIPPINES.

¹jakelaguador@yahoo.com, ²oel_0419@yahoo.com

ABSTRACT

This study aimed to determine the status of Waste Management practices of Brgy. Wawa residents in terms of: waste disposal, segregation, seashore clean-up, cooperation with Lyceum International Maritime Academy (LIMA), environmental cleanliness and the contribution of LIMA community extension service to the waste management practices of the Barangay. The descriptive type of research was utilized in the study and used random sampling technique to the 188 residents of the adopted community. The results showed that the status of waste management practices of Brgy. Wawa is already well-mannered and orderly but still really need to sustain innovate and develop more the habit of the best practices in waste management. Their practices had been already improved through the community extension service of LIMA from the results obtained three years ago.

Keywords: Community Extension Service, Waste management, LPU

INTRODUCTION

There's always been a problem of trash from man's earliest time. Humans are, by very nature, careless with their trash as they let it fall where it may (Barbalace, 2003). But the problem of waste usually reaches to an alarming level when population becomes concentrated in larger towns and cities. It draws attention to the task of education today. "In today's globalized and interconnected world," he says, "living together peacefully has become a moral, social and political imperative on which depends, to a great extent, the survival of humankind (Stavenhagen, 2008; Gourley, 2009). Deauna (1998), reiterated that people in the industrialized nations produce larger amounts of wastes per person.

Baterina (2000) found out in his study that the net weight in kilograms of solid wastes generated daily by the household in Metro Poblacion alone in Sto. Domingo, Ilocos Sur, reflects the magnitude of dilemma on solid waste management. The seven barangays in his study accumulate more than two tons a day, which, if unattended could possibly pose a hazard to the constituent community.

Broadening the horizon of community extension is an important role of the academic institutions (Laguador & Chavez, 2013). As an educational institution of higher learning, it is part of the social responsibility of the Lyceum International Maritime Academy to extend its mission of providing quality education and service not only to the maritime students of the university but also to the residents of the nearby community who need to uplift their living condition. The Lyceum of the Philippines University – Batangas has an adopted community for five years, the Barangay Wawa in Batangas City which is geographically located near the Lyceum International Maritime Academy Campus (LIMA). The Academy has been an active

partner of Barangay Wawa in cleaning its shoreline whose partnership has established camaraderie and unity among the people in the vicinity.

This study determined the level of community extension services of the Lyceum International Maritime Academy in bringing out its social responsibility to the underprivileged people of Brgy. Wawa as perceived by the resident-respondents. The study recognized the commitment of the Lyceum community in helping out people to uplift their living condition through keeping the shoreline of Brgy. Wawa clean and pollution free. It also aimed to determine waste management practices of Brgy. Wawa in terms of waste disposal, waste segregation, seashore clean-up. It also investigated the level of cooperation with LIMA as well as their opinion on environmental cleanliness.

This research dealt with the threefold function of Higher Educational Institutions namely: instruction, research and community extension. Considering the results of the evaluation on the community extension services provided by LIMA to Brgy. Wawa and their existing waste management practices, the researcher prepared a concrete action plan that would address the issues and concerns noted in this study. LIMA conducted some series of seminars and trainings with some Barangay Officials and residents of Brgy. Wawa on proper waste management. The researcher deemed to emphasize the importance of having a pollution-free environment. The measurement of the program's effectiveness is based on its capability to manage both situational and national security problems at the same time while the focus of the program's effectiveness is on the four management areas of community participation, technology, funding and institutions (Fernando, 2000).

The action plan was designed and served as the guiding path to educate the marine students and enhance the leadership capability of faculty members in terms of volunteerism which is one of the characteristics of a true Lyceum. The output of the study serves as guide for Brgy. Wawa to reassess their efforts in making their environment free from all kinds of pollution. Each individual should take part in taking care of the environment. The results of this study can also be used by the City Government of Batangas City as basis for interventions to further improve the procedures on solid waste management and disposal in the city.

OBJECTIVES OF THE STUDY

This study aimed to determine the status of Waste Management of Barangay Wawa residents. Specifically, this study was guided by the following objectives:

1. To determine the profile of respondents in Brgy. Wawa in terms of:
 - 1.1 Gender;
 - 1.2 Age;
 - 1.3 Educational Attainment;
 - 1.4 Occupation; and
 - 1.5 Number of children.
2. To determine the level of awareness of the respondents on waste management practices in Brgy. Wawa in terms of:
 - 2.1 Sanitation;
 - 2.2 Social responsibility.
3. To analyze the status of waste management practices of the residents of Brgy. Wawa in terms of:
 - 3.1 Waste disposal;

- 3.2 Waste segregation;
 - 3.3 Seashore clean-up;
 - 3.4 Cooperation with LIMA volunteers.
- 4 To analyze if there is a significant relationship between the profile and the status of waste management practices of the residents of Brgy. Wawa.
 - 5 To propose an action plan based on the salient findings of the study.

MATERIALS AND METHODS

The descriptive type of research was utilized in the study. Descriptive survey method is appropriate for data derived from simple observational situations, whether these are actually physically observed or observed through the use of a questionnaire or poll techniques (Zulueta & Costales, 2003). The survey questionnaire for determining the waste management transformation was used to collect information from the perception of the Brgy. Wawa residents.

Participants

The respondents of the study were 188 Brgy. Wawa Residents out of 996 families. They were identified using simple random sampling technique. In answering the questionnaire, each respondent represented one family. From LIMA community, there were 17 faculty members presently employed and 83 BS Marine Engineering students enrolled during 1st semester SY 2008-2009 at Lyceum of the Philippines University in Batangas who participated in the study.

Instrument

A survey questionnaire was formulated by the Lyceum Community Extension Officers. It is composed of set of statements which determined the undergoing waste management practices in Wawa with five different set of variables namely: waste disposal, waste segregation, shoreline cleaning, cooperation with LIMA, environmental cleanliness and level of community extension service being provided by LIMA to the Brgy. Wawa.

Data Analysis

The data collected were classified, tabulated and coded using Microsoft Excel for analysis. Frequency, weighted mean, percentage, rank, t-test and ANOVA were the statistical tools used to analyze all the data.

The following arbitrary point scale was utilized to determine the status of Waste Management Disposal of Brgy. Wawa:

Weight	Range	Verbal Interpretation
4	3.50 – 4.00	Always
3	2.50 – 3.49	Often
2	1.50 – 2.49	Seldom
1	1.00 – 1.49	Never

The following arbitrary point scale was utilized to identify the role of the Lyceum community in the waste management disposal of Brgy. Wawa:

Weight	Range	Verbal Interpretation
5	4.50 – 5.00	Strongly Agree
4	3.50 – 4.49	Agree
3	2.50 – 3.49	Moderately Agree
2	1.50 – 2.49	Disagree
1	1.00 – 1.49	Strongly Disagree

RESULTS AND DISCUSSION

Table 1 presents the frequency distribution of the respondents according to gender:

Table 1. Frequency Distribution of the Respondents According to their Profile

		<i>f</i>	%
<i>Gender</i>	Female	95	51
	Male	93	49
<i>Age</i>	15-26	17	9
	27-38	66	35
	39-50	62	33
	51-62	32	17
	63-above	11	6
<i>Educational Attainment</i>	Grade 1-5	14	7
	Elem	40	21
	1ST -3RD HS	10	5
	HS	86	46
	1 st – 3rd College	7	4
	College	31	16
	None	62	33.0
<i>Occupation</i>	Vendor	47	25.0
	Tricycle Driver	29	15.4
	Fisherman	24	12.8
	Carpenter/Barber	4	2.1
	Shirt Printing/Art Sign	4	2.1
	Brgy. Official	3	1.6
	Kargador	3	1.6
	Sales	3	1.6
	Buko juice dealer/Helper	2	1.1
	Factory/Office Worker	2	1.1
	Labandera	2	1.1
	Police	2	1.1
	Student	1	0.5
	None	25	13.3
<i>No. of Children</i>	1 – 3	100	53.2
	4 – 6	54	28.7
	7 – 9	5	2.7
	10 -12	1	0.5
	No Answer	3	1.6

Majority of the respondents are female with 95 or 51 per cent while male respondents are composed of 93 or 49 per cent. The respondents are almost equally distributed in terms of gender. Majority of the respondents are 27 – 38 years old which is 35 per cent followed by the 39 – 50 years old and 51 – 62 years old with 33 per cent and 17 per cent respectively. The least represented in the distribution of respondents are those who belong to the age brackets of 15 – 26 years old and 63 years old with 9 per cent and 6 per cent respectively.

Majority of the respondents are high school graduates which with 86 respondents or 46 per cent followed by the elementary graduates with 40 respondents or 21 per cent. Thirty one (31) respondents or 16 per cent are College graduates 14 respondents belong to Grade 1-5 and 7 respondents fall on the bracket of 1st – 3rd year High School with 7 per cent and 5 per cent respectively. The least represented in the distribution of the respondents is 1st – 3rd year college with 7 or 4 per cent.

Majority of the respondents are without present occupation. Almost one-third of the respondents are plain housewives with 62 or 33 percent. Forty-seven of them are vendors with 25 per cent and tricycle drivers with 29 or 15.4 per cent. Twenty-four respondents are fishermen with 12.8 percent. There are 4 carpenters/barbers and 4 shirt printing and art sign business representing 2.1 per cent of the respondents. The 4.8 per cent belongs to the brgy. officials, kargador and sales-related work with 3 respondents or 1.6 per cent each. The 4.4 per cent belongs to the Buko juice dealer/Helper, Factory/Office Worker, Labandera and Police with 2 respondents or 1.1 per cent each. Only 1 student answered the survey.

More than one –half of the respondents or 100 which is 53.2 per cent have 1 to 3 children followed by the respondents with 4 – 6 children comprised of 54 or 28.7 per cent. Twenty – five respondents are without children while 5 respondents or 2.7 percent have 7 – 9 children.

Level of Awareness of LIMA community on waste management practices of Brgy. Wawa

Table 2 shows the level of awareness of LIMA Community on waste management in terms of sanitation.

Table 2. Level of Awareness of LIMA Community on Waste Management Practices of Brgy. Wawa in Terms of Sanitation

Community Extension Service of Lyceum International Maritime Academy	Student		Faculty		Total		Rank
	WM	VI	WM	VI	WM	VI	
1. Cleaning the shoreline of Brgy. Wawa is very important to avoid water pollution.	4.80	SA	5.00	SA	4.83	SA	1
2. The Calumpang River is one of the best sources of livelihood for Brgy. Wawa	3.80	A	4.94	SA	3.98	A	5
3. Maintaining the healthy condition of the river would also mean a healthy living for the residents to avoid diseases.	4.79	SA	4.63	SA	4.76	SA	3
4. A clean shoreline is beneficial for the sea creatures to have a healthy ecosystem.	4.75	SA	4.94	SA	4.78	SA	2
5. A clean shoreline will provide an attractive atmosphere as part of LIMA premises.	4.75	SA	4.63	SA	4.73	SA	4
<i>Composite Mean</i>	4.58	SA	4.83	SA	4.62	SA	

The Maritime students and faculty members strongly agreed that cleaning the shoreline of Brgy. Wawa is very important to avoid water pollution with weighted mean scores of 4.80 and 5.00 respectively. They also strongly agreed that a clean shoreline is beneficial for the sea creatures to have a healthy ecosystem (WM = 4.78). They strongly agree that maintaining the healthy condition of the river would also mean a healthy living for the residents to avoid harmful diseases (WM = 4.76) which falls under the “Strongly Agree” verbal interpretation.

Based on the awareness of the marine students, a clean shoreline will provide an attractive atmosphere as part of LIMA premises with a weighted mean score of 4.75 which falls under the “Strongly Agree” verbal interpretation. Meanwhile, faculty members also believed to the significance of having a fascinating atmosphere and school vicinity with a weighted mean of 4.73 which also falls under the “Strongly Agree” verbal interpretation. This implies that LIMA community recognized the importance of having a clean environment not only for the people living beside the stream but also in all parts of the community. They also believed that cleanliness of the surroundings reflects the diligence and productiveness of the people in the area. Marine students agreed that the Calumpang River is one of the best sources of livelihood of Brgy. Wawa (WM = 3.80). This statement was rated as the lowest by the Marine students, because they do not have enough knowledge regarding the living condition of Wawa residents. On the other hand, Faculty members strongly agreed that the river provides livelihood for the people living the river side (WM =4.94) with a total weighted mean score of 3.98 which falls under the “Agree” verbal interpretation.

Table 3 presents the role of Maritime Students and Faculty members in waste management practices of Brgy. Wawa in terms of their social responsibility.

Table 3. Level of Awareness of LIMA Community on Waste Management Practices of Brgy. Wawa in Terms of Social Responsibility

<i>Community Extension Service of Lyceum International Maritime Academy</i>	<i>Student</i>		<i>Faculty</i>		<i>Total</i>		
	<i>WM</i>	<i>VI</i>	<i>WM</i>	<i>VI</i>	<i>WM</i>	<i>VI</i>	<i>Rank</i>
1. I will support the Community Extension program of LIMA for the benefit of every resident of Brgy. Wawa.	4.27	A	4.81	SA	4.36	A	3
2. I will become a good example for the children of Wawa on how to dispose garbage properly.	4.42	A	4.75	SA	4.47	A	1
3. I am willing to be trained on how to become a volunteer.	3.99	A	4.88	SA	4.13	A	9
4. I will use my leadership skills to conduct and facilitate seminars regarding waste management system.	4.13	A	4.81	SA	4.24	A	5
5. I will promote a good habit of protecting the natural environment from any harmful activities.	4.42	A	4.63	SA	4.45	A	2
6. I will extend my time and effort to clean the shoreline of Brgy. Wawa.	3.58	A	4.31	A	3.70	A	12
7. I will utilize any available resources that I have to contribute something for the welfare of my community.	3.87	A	4.75	SA	4.01	A	11
8. I will advocate the philosophy of having a clear understanding on the benefits of pollution-free environment.	4.10	A	4.94	SA	4.23	A	6.5

<i>Community Extension Service of Lyceum International Maritime Academy</i>	<i>Student</i>		<i>Faculty</i>		<i>Total</i>		<i>Rank</i>
	<i>WM</i>	<i>VI</i>	<i>WM</i>	<i>VI</i>	<i>WM</i>	<i>VI</i>	
9. I will give my best effort to become a part of a community whose mission is to invigorate the spirit of volunteerism.	3.93	A	4.56	SA	4.03	A	10
10. I will use my talent and capability to build a strong relationship with people at Brgy. Wawa to get their sympathy and support.	4.15	A	4.63	SA	4.23	A	6.5
11. I'm very willing become an instrument of change to help us achieve a pollution-free environment.	4.18	A	4.88	SA	4.29	A	4
<i>Composite Mean</i>	<i>4.09</i>	<i>A</i>	<i>4.7</i>	<i>SA</i>	<i>4.19</i>	<i>A</i>	

Faculty members strongly agreed that they will become a good example for the children of Wawa on how to dispose of garbage properly with a weighted mean score of 4.75, while the students rated this statement 4.27 which is lower than the score given by the faculty members which falls under the "Agree" verbal interpretation. The total weighted mean of this statement falls under the "Agree" verbal interpretation which is 4.47 obtaining the highest rank.

Faculty members strongly agreed that they will promote a good habit of protecting the natural environment from any harmful activities as manifested by the weighted mean of 4.63, while students rated this statement with a weighted mean of 4.42 which is lower than the rate given by the faculty members which falls under the 'Agree' verbal interpretation. The obtained total weighted mean of this statement is 4.45 which fall in the second rank under the "Agree" verbal interpretation.

Third in rank is the statement "I will support the Community Extension program of LIMA for the benefit of every resident of Brgy. Wawa (WM = 4.36) which falls within the "Agree" verbal interpretation. Faculty members rated this statement with 4.81 as weighted mean which is higher compared to the rating given by the maritime students which is 4.27.

Fourth in rank is the statement "I'm very willing to become an instrument of change to help us achieve a pollution – free environment" (WM = 4.29) which falls within the "Agree" verbal interpretation. Faculty members rated this statement with 4.88 as weighted mean which is higher compared to the rating given by the maritime students which is 4.18.

Maritime students agreed that they use their leadership skills to conduct and facilitate seminars regarding waste management practices with a weighted mean score of 4.13 which is lower compared to the rating given by the faculty members which is 4.81. the total weighted mean score of this statement is 4.24 which falls under the "Agree" verbal interpretation.

Faculty members strongly agreed that they will advocate the philosophy of having a clear understanding of the benefits of pollution-free environment and they will use their talent and capability to build a strong relationship with people at Brgy. Wawa to get their sympathy and support (WM = 4.23) which fall within the "Agree" verbal interpretation.

The three statements rated as the lowest by the respondents were "I will give my best effort to become a part of a community whose mission is to invigorate the spirit of volunteerism" (WM = 4.03); "I will utilize any available resources that I have to contribute something for the welfare of my community" (WM = 4.01) and "I will extend my time and effort to clean

the shoreline of Brgy. Wawa” (WM = 3.70). These statements have something to do with time, effort and resources of the respondents. The results showed that students must be given insight and idea regarding the importance of volunteerism to their profession. They must be given an inspiration and motivation that would push their desire to have a compassionate feeling to share whatever they can afford even their time, moral and spiritual support if without money to give out.

Majority of the responses given by the faculty members were verbally interpreted as “Strongly Agree” while all the responses given by maritime students fall under the “Agree” verbal interpretation. These imply that faculty members certainly commit themselves to the undertakings related to the community extension program of LIMA. Meanwhile, the responses of maritime students were verbally interpreted as “Agree” which means that they still need to be motivated and encouraged to open their hearts to the community most especially to the needy. They have to acquire the value of volunteerism through various activities to be undertaken by LIMA Management.

Status of Waste Management Practices of the Residents of Wawa

More than half of the respondents stated that they always wait for the garbage truck to collect their garbage with 101 or 53.7 per cent. Thirty – six or 19.1 per cent of the respondents answered “often” while 17 respondents or 9 percent and 4 respondents or 2.1 per cent answered seldom and never respectively. Brgy. Wawa respondents answered that they rarely burn their garbage as affirmed by 79 respondents or 42 per cent. Sixty-one respondents replied that they never burn their garbage maybe because of lack of space to burn it while 29 and 12 respondents said that they burn up their waste sometimes and always respectively. Seven or 3.7 percent of the respondents did not answer this question.

All weighted mean scores obtained from the study in 2008 revealed that there have been improvements on the waste disposal done by the Wawa residents compared to the weighted mean score obtained from the study in 2005.

Previously, dumping of waste in the river obtained a weighted mean of 1.35 compared to 1.27 in the present study. This implies that there is an evident decrease of residents who dispose of their waste in the shoreline of Wawa. The LIMA community believes that its continuous effort of educating the residents regarding the proper disposal of waste materials will result in zero water pollution in the area.

Burning of waste previously obtained a weighted mean score of 2.95, but there is a decrease of almost 1 point based on the result of this study. This implies that the residents of Brgy. Wawa already value the preservation of the ozone layer. This change in behavior may be attributed to the efforts of the Lyceum Community in educating the residents on the protection and preservation of the ozone layer. Destruction of the ozone layer will definitely have harmful effects to human beings.

Digging of land to throw their waste obtained a weighted mean score of 1.75 based on the previous study compared to the mean score of 1.91 obtained in the study. Previously, waiting for the dump track obtained a weighted mean of 3.13 compared to 3.20 in this study. It means that Wawa residents are now patient in waiting for the garbage truck to fetch their waste materials.

Table 4 presents the frequency distribution of the respondents according to waste segregation. Majority of the respondents sometimes segregate waste as manifested by 64 respondents or 34 per cent, while 42 of them or 22.3 percent believed that they often do the segregation. But as a whole, people in Wawa often segregate their waste as manifested by a weighted mean score of 2.57.

Table 4. Frequency Distribution of the Respondents According to Waste Segregation

	<i>Always</i>	<i>Often</i>	<i>Seldom</i>	<i>Never</i>	<i>WM</i> <i>2008</i>	<i>VI</i>	<i>WM</i> <i>2005</i>
	%	%	%	%			
Segregating of Waste	21.3	22.3	34.0	13.3	2.57	Often	2.09
Combining of wastes	16.0	21.8	44.7	9.6	2.48	Seldom	2.78

The result of the statement number 2 revealed that 84 respondents or 44.7 percent affirmed that they rarely perform the combination of the biodegradable and non-biodegradable which somewhat contradicts to their answer in statement number 1 because it revealed that they only rarely do both processes. It means that, majority do not handle their waste materials properly since only 40 of them or 21.3 per cent said that they always do segregation of waste. In short, they still encounter problems with waste segregation. Generally, people in Wawa do waste segregation rarely or seldom as manifested by a weighted mean score of 2.48.

There has been a noted improvement on the waste management practices of Wawa residents in terms of segregating their waste materials based on the results of the studies conducted in from 2005 and 2008. This implies that people are already implementing what they have learned from the program previously implemented by LIMA.

Table 5 presents the status of the respondents according to Cooperation with LIMA. People in Wawa always working together with LIMA faculty members and students in cleaning the shoreline as indicated by 98 or 52.1 per cent while 60 respondents or 31.9 per cent said that they often cooperate with LIMA and only 3 or 1.6 percent said that they never collaborate with LIMA in cleaning the shoreline as manifested by a weighted mean score of 3.35 which falls within the verbal interpretation of often.

Table 5. Frequency Distribution of the Respondents According to Cooperation with LIMA

	<i>Always</i>	<i>Often</i>	<i>Seldom</i>	<i>Never</i>	<i>No</i> <i>Answer</i>	<i>WM</i> <i>2008</i>	<i>VI</i>	<i>Rank</i> <i>2005</i>
	%	%	%	%	%			
Participation of Students and Teachers in cleaning activities	52.1	31.9	13.8	1.6	0.5	3.35	Often	3.25
Applying of learning from seminar	31.9	41.0	19.1	6.4	1.6	3.00	Often	2.23
Following the schedule of waste disposal	46.8	38.3	10.6	3.7	0.5	3.29	Often	3.01
Prevention of waste disposal underneath the bridge	44.1	37.8	10.1	6.9	1.1	3.20	Often	3.02

They always follow the schedule of throwing their waste materials as indicated by 88 respondents or 46.8 per cent while 72 respondents or 38.3 per cent said that they often doing it and only 7 or 3.7 percent replied that they never doing it. The weighted mean score of 3.29 shows that they often following the schedule of throwing their garbage compared to the 3.01 previous weighted mean.

They also avoid throwing waste materials underneath the bridge as indicated by 83 or 44.1 per cent, while 71 or 37.8 percent said that they sometimes avoid doing it. The weighted

mean score of 3.20 shows that people in Wawa often prevent themselves from throwing anything under the bridge compared to 3.02 previous weighted mean. It means that there is an improvement in the manner they dispose of their garbage properly.

The lowest among the four indicators under the variable cooperation with LIMA is the implementation of what they have learned from the seminar conducted by LIMA. It has a weighted mean score of 3.00 which falls within the verbal interpretation of sometimes. Seventy –seven of them or 41 percent said that they sometimes implement what they have learned but most of the time they do not. But 60 respondents or 31.9 percent said that they always follow what they have learned from the seminar.

Participation of Students and Teachers in cleaning activities obtained a weighted mean score of 3.25 in the previous study compared to the 3.35 in the present study. This implies that they are now more cooperative and supportive of the project of LIMA in coastal cleaning.

Previously, applying of learning from seminar obtained a weighted mean of 2.23 compared to the 3.00 in this study. This means that they seriously implementing the knowledge they have gained from the seminars.

Significant relationship between profile and waste management practices of Brgy. Wawa

Table 6 shows the significant relationship between the gender and the waste management practices of Brgy. Wawa.

Table 6. Significant Difference between Gender and Waste Management Practices of Brgy. Wawa

	<i>Gender</i>	<i>Age</i>	<i>Educational Attainment</i>	<i>Occupation</i>	<i>No. of Children</i>
Waste disposal	.425	.304	.427	.122	.749
Waste segregation	.965	.448	.855	.209	.869
Seashore clean-up	.046	.919	.157	.831	.400
Cooperation with LIMA volunteers	.858	.042	.805	.037	.191
Environmental Cleanliness	.553	.553	.175	.486	.87

Legend: $\alpha < 0.05$ – significant; $\alpha > 0.05$ – not significant

There is no significant relationship between the responses of male and female respondents in terms of waste disposal, waste segregation, cooperation with LIMA volunteers and Environmental Cleanliness. It means that they have the same perception and experience with regards to the mentioned variables. This also implies that either male or female, they rated these variables either high or low. On the other hand, there is a significant relationship between the responses of male and female respondents in terms of seashore clean-up. This means that female respondents rated this variable lower compared to the responses given by males.

There is no significant relationship between the age of the respondents in terms of waste disposal, waste segregation, seashore clean-up and Environmental Cleanliness. It means that they have the same perception and experience with regards to the mentioned variables. This also implies that whatever age bracket they belong, they rated these variables either high or low. Therefore, the null hypothesis of no significant relationship is accepted. On the other

hand, there is a significant relationship between the age of the respondents and their Cooperation with LIMA volunteers. This means that the age of the respondents has significant relationship in terms of Cooperation with LIMA volunteers. Therefore, the null hypothesis of no significant relationship is rejected.

There is no significant relationship between the educational attainment of the respondents in terms of waste disposal, waste segregation, seashore clean-up, cooperation with LIMA volunteers and environmental cleanliness. It means that they have the same perception and experience with regards to the mentioned variables. This also implies that whatever educational attainment they have, they rated these variables either high or low. The null hypothesis of no significant difference is accepted. All variables obtained greater than the 0.05 level of significance. Therefore, they are not significantly related in terms of educational attainment and waste management practices.

There is no significant relationship between the occupation of respondents in terms of waste disposal, waste segregation, seashore clean-up and Environmental Cleanliness. It means that they have the same perception and experience with regards to the mentioned variables. This also implies that whatever occupation they belong, they rated these variables either high or low. Therefore, the null hypothesis of no significant relationship is accepted. On the other hand, there is a significant relationship between occupation of respondents and their Cooperation with LIMA volunteers. This means that occupation has significant relationship in terms of Cooperation with LIMA volunteers. Therefore, the null hypothesis of no significant relationship is rejected.

There is no significant relationship between the number of children of respondents in terms of waste disposal, waste segregation, seashore clean-up, cooperation with LIMA volunteers and environmental cleanliness. It means that they have the same perception and experience with regards to the mentioned variables. This also implies that whatever educational attainment they have, they rated these variables either high or low. Therefore, the null hypothesis of no significant relationship is accepted. All variables obtained greater than the 0.05 level of significance.

PROPOSED ACTION PLAN

The proposed action plan contains the leadership trainings and seminars especially designed for marine students in order for them to experience the essence of sharing their time and energy with other people. Faculty members should train their students in community work and inculcate in their minds the importance of unity volunteerism. Maritime students should serve as potential partners of LIMA in implementing its community extension activities in line with its Community Extension Program for Barangay Wawa community. Leadership trainings and seminars are suggested to uplift the moral values of the students and make them realize the value of social responsibility.

CONCLUSION

Majority of the respondents are female with only little difference from male, mostly 27 – 38 years old who are high school graduates without occupation and having 1 to 3 children. The Maritime students and faculty members have very high level of awareness in terms of sanitation and high level of awareness in terms of social responsibility. Lyceum International Maritime Academy has contributed to the enhancement of the waste management practices of Brgy. Wawa residents. There is a significant relationship between the responses of male and female respondents in terms of seashore clean-up. There is a significant relationship between the age of respondents and Cooperation with LIMA volunteers. There is a significant relationship between the occupation of the respondents and their Cooperation with LIMA

volunteers. The proposed action plan contains the leadership trainings and seminars especially designed for marine students in order for them to experience the essence of sharing their time and energy with other people.

RECOMMENDATION

LIMA has to strengthen their camaraderie among the people in the community to get easily their support in whatever program that LIMA will provide. LIMA may help the community appreciate the importance of self-discipline and social responsibility for the welfare and well-being of the people in the barangay. LIMA may regularly monitor the practices of the people in the barangay with regards to waste segregation. The residents should always be reminded about the importance of waste segregation. In doing the information drive, LIMA should not just tell the importance of the activity but LIMA must show to the people in the community their sincerity and sense of social responsibility. Related studies may be conducted to confirm the results of this study. Future researchers may also explore and include other variables that will help the students, faculty members and the society to obtain appropriate advanced learning and training. The proposed action plan may be implemented with the cooperation of LIMA faculty members, marine students and Wawa residents. The said plan aims to improve the community extension services of LIMA with the end view of promoting the values of unity, cooperation, sharing among the members of the LIMA community and the residents of Brgy. Wawa.

REFERENCES

- Barbalace, K. (2003). The History of Waste. EnvironmentalChemistry.com. Retrieved on June 12, 2013, from <http://EnvironmentalChemistry.com/yogi/environmental/wastehistory.html>
- Baterina, I. A. (2000). *Solid Waste Management Program of Sto. Domingo, Ilocos Sur*, Master's Thesis, University of Northern Philippines, Vigan City.
- Deauna, M. C. et al., (1998). *Environmental Science for Philippine Schools*, Phoenix Publishing House, Inc.
- Fernando, M. L. M. (2000). *A Study of Solid Waste Management in Greater Metro Manila and its Implications for National Security*, Unpublished Master's Thesis, National Defense College of the Philippines.
- Gourley, B. M. (2009). Higher Education as a Force for Societal Change in the 21st Century, The Campus Engage International Conference, "Higher education and civic engagement partnerships: create, challenge, change".
- Laguador, J. M. & Chavez, N. H. (2013). Assessment of Engineering Students' Acquired Affective Learning From Involvement in Community Extension Services. *Academic Research International*, 4(3), 188 – 197.
- Stavenhagen, R. (2008) Building Intercultural Citizenship through Education: a Human Rights Approach. *European Journal of Education*, 43(2) pp 161–179.
- Zulueta, F. M. and Costales, Jr., N. E. B. (2003). *Methods of Research: Thesis-Writing and Applied Statistics*. Navotas, Metro Manila, Philippines: Navotas Press, ch. 5, pp. 75-76.