

Implementation of Waste Management in Baliwasan Senior High School: Basis for Action Plan

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ABSTRACT

This study determined the implementation of waste management in Baliwasan Senior High School in School Year 2022-2023. This is a descriptive quantitative type of research employing a survey questionnaire process and document. This study involved 100 students from different tracks in the school. A proportional quota sample, using quota sampling, was employed. The study was delimited only to the implementation of waste management and the extent of the implementation of waste management on the school campus. The findings revealed that the level of implementation of waste management got a high mean and has a very high level in the disposal regulation. The extent of implementation of waste management in terms of biodegradable, non-biodegradable, and recyclable got a high mean which indicates a high extent of implementation. It further reveals that there is no significant difference in level of implementation of waste management by track, where HUMSS and STEM got the highest mean from the rest of the tracks. The significant Relationship between the level of implementation of waste management and the extent of implementation of waste management, indicates a significant correlation between biodegradable, non-biodegradable, and recyclable. A seminar-workshop and advertising campaign on the latest waste management implementation has already been crafted as an action plan. The study recommended that the DepEd officials may support the intervention or the action plan program of the school to enhance and develop the proper and valuable waste management implementation.

Keywords: Biodegradable; Non-Biodegradable; Recyclable; Waste Management; Waste Management Implementation

INTRODUCTION

Solid Waste Management is defined as “the discipline associated with the control of generation, storage, collection, transport or transfer”, it includes processing, and disposal of solid waste materials that discourses the range of public health, conservation, economics, aesthetics, engineering, and some environmental considerations. In its broader sense, the term includes some planning, administrative, financial, engineering and legal functions. The best solutions include complex inter-disciplinary relations between public health, city and regional planning with some political science, geography, sociology, economics, communication and conservation, demography, engineering and material sciences. The practices can differ with each residential and industrial producer in terms of solid waste management in the urban and rural areas which are developed and developing nations. More so, there should be an act done by the administration of non-hazardous waste in metropolitan areas which is the work of each local government authorities. Managing hazardous waste materials is at most subject to local, national and even international authorities. (Leblanc 2018,1).

With the increase of waste generation yearly and with heavy reliance in some landfilling as a disposal method in Malaysia, the significant problems of space limitations, health and environment issues is just a matter of time that hit the nations severely. The study attempts in doing an overview plan to develop a solid waste

recycling in Malaysia in the most basic ground in the community or nation that refers to the household unit. The main primary source of municipal solid waste is the household unit consisting or recyclable materials. (Moh and Manaf 2014, 50-61)

Likewise, there are 1.2 billion tons of solid waste in the municipality in 2016 and this is expected to increase to 1.5 billion by the end of 2030 and 1.9 billion tons by the year 2050 (World Bank 2018,1). With the rapid urban expansion, there has been complication on the collection processes, open dumping and unregulated GHG emissions that are critical problems exacerbating Asia's SWM problem that failed to separate waste at source. (Dhokhikah and Trihadiningrum 2012, 329-335).

Similarly, the practices about waste management differ in some developed and developing nations, may it be urban and rural areas, residential and industrial producers. To properly managed non-hazardous waste, the sole responsibility of local government authorities is the residential and institutional waste in the metropolitan areas. In the contrary, the responsibility of the generator subject to local, national, or international controls are management of non-hazardous commercial and industrial waste. Everyone should take responsibility in managing waste properly as public awareness campaign are some of the essential tools for the protection of the environment. Therefore, encouraging people to take part of its objective in protecting our environment through being disciplined with proper waste management. (Lomocho et al. 2013, 1).

Moreover, (Covarubias 2016,1) the City Hall Information Officer, said the OCENR, from September to the end of this year, will be conducting a series of information drives and meetings in the 98 villages and stakeholders to iron out procedures and policies in preparation for the implementation of the provisions highlighted in the Ordinance. Following the Ordinance that is approved on July 7, 2016 contains the provisions on the appropriate mandates' segregation of proper solid waste in some residential, institutional, agricultural and commercial establishments and groups of representatives of village and law enforcers to issue ticket for violations and imposing garbage fee for business establishments and residential units.

As per observation, waste management regulation has become a vital role in every city. The fact that people experience floods when heavy rain pours, they do face with flooded areas and the worst thing is that people lack best practices to control this scenario. To have a solution in terms of floods, people need to make a move to do something with proper waste management, as this is the first step to controlling floods when there is a storm surge.

The present study aimed to assess the implementation of waste management of Baliwasan SHS and the extent of waste management in terms of biodegradable, non-biodegradable, and recyclable on the school campus. This study is allied to the Republic Act 9003, otherwise known as the Ecological Solid Waste Management Act of 2000, which mandates that some of the local government unit may achieve 25% waste reduction in establishing an integrated solid waste management plan that focused on 3Rs – reduce, reuse and recycling.

LITERATURE REVIEW

The term 'solid waste' refers to all non-liquid waste which are generated by human activity with a range of solid waste materials that results to disaster like general domestic garbage – food waste, ash and packaging materials; human feces disposed in the garbage; plastic water bottles and packaging from emergency supplies which are emergency waste; rubble, mud and slurry deposited by natural disaster; some fallen trees that obstruct transport and communication. There are also other special wastes like medical waste from hospitals and toxic waste from industry must be dealt with urgency, somehow not covered by the technical note. (World Health Organization 2011,1).

Similarly, there are many factors that contributed to the letdown of some policies to address the problems of waste management. With reasonable intention of these policies, still they tend to failed in having cooperation of the community and some stakeholders just because there are laws were all focused to "command and control" in nature. Other factor could be relating to archipelagic nature of our country, the Philippines which has a more complex implemented policy. In the absence of some development in infrastructure for a better transportation especially in the inner areas, provinces, cities and barangay could be a factor for inefficient and

ineffective monitoring of the waste management implementation programs. Moreover, with the nature of politics in the political system with too much bureaucracy not only delays the implementation of rules and regulations but it creates more opportunities for inducement and corruption in general. Besides, being a democratic country the “Philippines”, elections are done to vote officials in every city and the nations itself. Hence, officials are afraid of violating some policies because they fear of being agitated by the people and to not vote them in times of elections. (Kojima and Michida 2011,1).

An investigation was made about the different methods and practices aligned with resources, quantity generated, collection, transportation, storage, treatment and disposal of the solid waste in the Municipality of Mysore City. The information concerning SWM in the city was attained by administering questionnaire, fields visits, contact with people and reliable records of the corporation in the municipality. Some evidence was found in photographic about the generation, storage, collection, transportation, treatment and disposal of MSW. It was found out that the present system of MSWM in Mysore City is unsatisfactory based on the Municipal Solid Waste Management & Handling Rules 2000. (Chandra and Devi 2009, 15-21).

Some of the case study across North America was conducted by Wholistic Environment Consulting (WEC 2011,1) on yard and food waste composed of over a quarter of all the trash was thrown away which is 25% by weight. In United States, there were 25% of yarn waste almost equally divided with food scraps around 32.6 million tons, or 12.8% of all MSW (31.7 million tons, or 12.5%). There is also this so called other organic stuff that could be composted. Majority of the clothing, towel, and bedding made of organic fibers plus wood, old furniture and sawdust. Then there’s paper which is 83 million tons, accounts for accounts for another 30% of municipal waste. The latest year as of 2006 for which the data are available, there are 64% of the yard waste we throw away was recovered and composted, were 54.5% are paper and cardboard. Only 2.6% of which are food waste and compost heap.

Other studies show that they described solid waste as the generation of undesirable substances left after being used and also as referred to as the useless and unwanted products in their solid waste from the activities of and discarded by the community. All materials in this world are somehow not helpful to one way or the other. It seems that they are not created just for nothing. Its man’s ignorance which is consider certain as waste and other things applicable. Just as other types of waste that is changing, the attitude towards waste also changes as to the concept of people. There must be a realization that the solution to use waste as a resource rather than being destroyed. Due to the threats to human health, these undesirable substances cannot be reused directly just like recyclables. The findings discovered that children aged 5-14 years old received the information about solid waste management mostly at school influenced their household. The indications about school campaigns are focused more on recycling which increases awareness and attitudes relating to solid waste management among children and parents. Some reports recommend that recycling habits be established on solid waste management that is concerned about sustainable solid waste. (Asmawati 2012,1)

Also, the study of (Ballados 2010, 37-44) was conducted on the solid waste management practices of the waste generators was analyzed from the solid waste management on the extent of their compliance with the Republic Act 9003 which is known as the Ecological Solid Waste Management Act of 2000. It was conducted in Bacolod City, Philippines way back 2007. The results of the study served as intervention for developing their content in the handbook about solid waste management.

Moreover, somewhere in Samar in Motiong town government where they vowed to intensify their implementation on Solid Waste Management Program after the one-day seminar workshop done by the barangay chairmen. The venue of the activity was at the Legislative Building on Wednesday, August 29. Mayor Langi Sr. said 30 barangay chairs of the municipality attended the seminar workshop sponsored by the town government. Langi also said that all barangay chairs were knowledgeable on the Solid Waste Management Act provision and also acquainted with and really implement the law in their own barangays and proliferate the environmental preservation. He said the town government would strictly implement the “no segregation, no collection policy” in all of Motiong’s barangays and urged the barangay officials to put up a Materials Recovery Facility (MRF) where they can segregate bio-degradable and non-biodegradable waste materials. Such materials can be turned into a livelihood as, according to Langi, “there is money in junk” (Abrematea 2012, 1).

Research Questions

This study aimed to determine the implementation of waste management in Baliwasan Senior High School.

Specifically, it sought to answer the following questions:

1. What is the level of implementation of waste management in Baliwasan SHS?
2. What is the extent of implementation of waste management at Baliwasan Senior High School in terms of;
 - 2.1 Biodegradable
 - 2.2 Non- biodegradable
 - 2.3 Recyclable?
3. Is there a significant relationship between the level of implementation of waste management, and the extent of implementation of waste management in Baliwasan SHS when classified according to biodegradable, non-biodegradable and recyclable?
4. Is there a significant difference in the level of implementation of waste management when data are categorized by track?
5. Based on the findings, what intervention program can be designed?

Scope and Limitation

This study was delimited to the extent of implementation of waste management of Baliwasan Senior High School students taking GAS, HUMSS, ABM, GAS, and TVL courses. The survey included items on the profile of the students and the extent of implementation of waste management. This was descriptive research that used a moderator variable such as biodegradable, non-biodegradable, and recyclable.

METHOD

Research Design

This study utilized a descriptive quantitative design that used a survey questionnaire to measure the implementation of waste management in Baliwasan SHS. It is said that descriptive research is a study of status and is generally used in the field of education, and its value is based on the premise that problems can be solved. Practices improved through observation, analysis, and description. Also, it sought to find variables such as biodegradable, non-biodegradable, and recyclable.

Research Participants

For this research, the target population was Baliwasan Senior High School of Zamboanga City students taking GAS, HUMSS, TVL, ABM, and STEM. There were 100 senior high school students as respondents in this study. As shown in Table 1, quota sampling was used to determine the sample size.

Table 1: Summary of Sampling Size

Strand	n	%
GAS	20	20%
HUMSS	20	20%
TVL	20	20%
ABM	20	20%
STEM	20	20%
Total	100	100%

In determining the sample size, quota sampling was used to come up with a fair and balance respondent in each strand. Based on the computation, one hundred (100) respondents defined the sample size. The researchers chose quota samples to get a sample subgroup that was of great interest to the study. A simple random sample was a randomly selected subset of a population. This study aimed to investigate a characteristic of a particular subgroup, this, type of sampling is the ideal technique. In proportional quota sampling, the significant characteristics of the population are represented by sampling them in regard to their proportion in the population of study. Proportional quota sampling is used in surveys and opinion polls, where the total number of people to be surveyed is typically decided in advance (Nikolopoulou 2022,1).

Research Instrument

The researchers crafted and formulated a self-made survey questionnaire with 20 statements on implementing waste management in Baliwasan SHS. The research instrument used in this study was an assessment tool made by the researchers and checked by a panel of experts in the field. The research tool has two parts survey questionnaire; Part I Profile solicits respondents' personal information and tracks; Part II consists of questions on the level of implementation of waste management with the scale of 5-Very High; 4 - High; 3 – Moderate; 2-Low; and 1- Very; Part III consists of 3 categories with 5 statement each concerning to the extent of implementation of waste management in terms of biodegradable, non-biodegradable and recyclable. It used a five-point Likert scale with the following descriptions of the numbers: 5- Very High Extent; 4 - High Extent; 3 – Moderate Extent; 2 - Low Extent; and 1- Very Low Extent.

The research instrument was validated by a panel of experts who are preferably doctorate holders. The survey - questionnaire was subjected to the Cronbach Alpha reliability test. The validators were given a validation form indicating their agreement or disagreement with each item. They were asked to write their suggestions, and remarks in the space provided in the same form. The researchers incorporated the remarks and suggestions of the validators in modifying the instrument.

For the reliability of the research instrument, the researchers administered the questionnaire to the non-respondents. The result of this study was computed using the Alpha Cronbach reliability, which was 0.92, interpreted as excellent reliable, and highly acceptable.

Data Gathering Procedure

Permission was sought from the Schools Division Superintendent through the Chief of Curriculum Implementation Division and Research and Planning office to conduct data gathering at Baliwasan Senior High School Stand-Alone, Zamboanga City Division. Upon approval, the researcher sought permission from the school heads by presenting the endorsement letter from the Division Office. Then, the researcher collected the data by administering the survey questionnaires through a Google link was sent to the senior high school, junior high school, and elementary school teachers. To complete the data, the researcher went to the identified schools to administer the hard copies of the questionnaire for those who could not make it in the Google form. The quantitative information was then collated, tabulated, and interpreted using statistical tools.

In compliance with the Research Ethics Protocol, the researchers obtained informed consent from the survey respondents specifying their awareness of the purpose of the study, their agreement to participate as survey respondents, their right to be informed of the results of the study, the benefits they will get if there will be any as a result of the study, and their right to confidentiality of information and anonymity of their identity.

Data Analysis

To facilitate the analysis of data, the following statistical tools using the Statistical Package for Social Sciences (SPSS) were used: Mean was utilized to measure the level and extent of implementation of waste management at Baliwasan Senior High School. Pearson R, was utilized to determine the level of implementation and the extent of implementation in terms of biodegradable, non-biodegradable, and recyclable. Analysis of Variance (ANOVA) was used to determine the significant difference in the implementation of waste management in terms of biodegradable, non-biodegradable, and recyclable.

RESULTS AND DISCUSSION

Table 2. Level of Implementation of Waste Management

Statements	Mean	Verbal Description
1. Prevention of waste generation is observed.	4.16	High
2. Minimization of waste or source reduction.	3.91	High
3. Recycling and reuse of useful materials.	4.04	High
4. Biological Treatment of waste in the school.	4.15	High
5. Landfill Disposal regulation in the school campus.	4.21	Very High
Over-all Mean	4.09	High

Legend: 1.0 – 1.79= Very Low Extent, 1.80– 2.59 = Low Extent, 2.60 – 3.39 = Moderate Extent, 3.40 – 4.19= High Extent, 4.20-5.00 = Very high Extent

Shown in Table 2 is the level of implementation of waste management in Baliwasan - SHS. More so, item number 5 has the highest mean of 4.16, where landfill disposal regulation in the school indicates a high level of implementation. This implies that having an overall mean of 4.09 shows that the school's implementation of waste management is highly regarded and very observable in all aspects.

The finding was supported by the Central Pollution Control Board (CPCB 2019, 24); one of the significant MSW disposal methods is landfills. Solid waste is thrown openly in some emerging countries without any action mentioned above, resulting in environmental corrosion. In India, there is a significant cause of groundwater degradation and air pollution in 3159 dumpsites. These are concerning about flames, stability, and depreciating esthetics. With bio-mining, it is the basic process to stabilized waste and to minimize harmful environmental impact. Furthermore, with these dumpsites it has been launched in different states due to the intervention of hon'ble NGT.

Table 3. Extent of Implementation of Waste Management in terms of Biodegradable

Statements	Mean	Verbal Description
1. Implements solid waste management in school.	4.12	High Extent
2. Has a systematic process in terms of biodegradable waste.	3.84	High Extent
3. Follows proper disposal of biodegradable waste.	4.17	High Extent
4. Establishes proper management and operation of biodegradable waste.	4.15	High Extent
5. Monitors the operation of biodegradable waste management in schools.	4.2	Very High Extent
Over-all Mean	4.10	High

Legend: 1.0 – 1.79= Very Low Extent, 1.80– 2.59 = Low Extent, 2.60 – 3.39 = Moderate Extent, 3.40 – 4.19= High Extent, 4.20-5.00 = Very high Extent

Illustrated in Table 3 is the extent of implementation of waste management in Baliwasan – SHS in terms of biodegradability. The data show that item 5 has the highest mean of 4.20, which monitors the operation of biodegradable waste management in schools, indicating a high extent of implementation. This implies that

having an overall mean of 4.10 shows that the extent of implementation of waste management in terms of biodegradability is visible in the school and to a high extent in its monitoring and operations.

The result was supported by (Inglezakis et al. 2012, 64–73); where composting and vermicomposting technologies should be done to treat organic waste, which will lead to minimize the quantum waste while downsizing the landfill used. The factors consider here are total moisture, chlorine concentration and calorific value whether to decide or not to proceed with treatment. There are also other technologies used like waste to energy, pyrolysis, incineration, bio-methanation and RDF for waste processing. However, the technologies may be adopted as described above only after checking its appropriateness based on the composition and financial aspects of waste.

Table 4. Extent of Implementation of Waste Management in terms of Non – Biodegradable

Statements	Mean	Verbal Description
1. Devises non-biodegradable waste management in school.	3.77	High Extent
2. Has organized operation in terms of non-biodegradable waste.	3.78	High Extent
3. Tracks proper disposal of non-biodegradable waste.	3.94	High Extent
4. Establishes proper management of non-biodegradable waste.	4.01	High Extent
5. Improves the operation of non-biodegradable waste on the campus.	4.15	Very High Extent
Over-all Mean	3.93	High

Legend: 1.0 – 1.79= Very Low Extent, 1.80– 2.59 = Low Extent, 2.60 – 3.39 = Moderate Extent, 3.40 – 4.19= High Extent, 4.20-5.00 = Very high Extent

Results revealed in Table 4 show the extent of implementation of waste management in Baliwasan – SHS in terms of non-biodegradable. The data illustrated that improving the operation of non-biodegradable waste on the campus got the highest mean of 4.15 which means that non-biodegradable wastes are highly given attention in their operation on the campus. This implies that having the overall mean of 4.10 shows that the extent of implementation of waste management in terms of non-biodegradable is appropriately in the school and with the high extent in its monitoring and operations.

The finding was supported by (Kothari and Sahab 2021,28), the global phenomenon experienced COVID-19 outbreak is among the severe health hazards with massive casualties and economic losses. The huge trash that COVID-19 disposed like protective equipment kits, masks, and gloves which have posed a significant challenge for waste management authorities. Waste management sector dramatically change due to lockdown protocols. Also, an increase in hazardous and biological waste in the percentage of MSW reaches the dumpsites. In order to protect human health waste must be manage carefully to decrease waste and avoid transmission of infection. The tendency of no proper procedure done will make the world confront a unique dilemma in a so called “waste disaster”. Some waste pickers experienced problem in the collection of waste due to lockdown which impacted the collection of waste. The combine effect of some medical emergency and the economic recession has weakened the well-being and income of workers in the informal sector.

Table 5. Extent of Implementation of Waste Management in terms of Recyclable

Statements	Mean	Verbal Description
1. Uses waste materials to be more productive and innovative.	4.03	High Extent
2. Develops proper management of the waste to be recycled.	4.00	High Extent
3. Builds up recyclables waste to make it useful.	3.93	High Extent
4. Adapts a sense of innovation from the waste materials.	4.09	High Extent
5. Proper disposal or operation of the recycled waste.	3.98	Very High Extent
Over-all Mean	4.01	High

Legend: 1.0 – 1.79= Very Low Extent, 1.80– 2.59 = Low Extent, 2.60 – 3.39 = Moderate Extent, 3.40 – 4.19= High Extent, 4.20-5.00 = Very high Extent

Data shown in Table 5 is the extent of implementation of waste management in Baliwasan – SHS in terms of recyclable. The data verified that adapting a sense of innovation of the waste materials got the highest means of 4.09 which means that recyclables are properly managed on the campus. This implies that the overall mean of 4.10 indicates that the extent of implementation on waste management in terms of recyclables is properly managed in the school. It is in the process of development on its innovation.

It is supported by many researchers where they recommend that proper recycling or the re-utilization of solid waste is reasonable solution which is economically, environmentally and socially feasible (Kiriaki 2018, 10); also, Dawit et al. (2019, 1) emphasized that promoting domestic garbage recycling is one essential thing to do to reduce waste volumes, conserve nature resources and in planning some transition for the good of the economy. The environmental implication of some waste disposal examined by governing authorities through the life cycle were built as sustainable household waste recycling system in partnership with academic research. The policy making process strongly contemplated from the elements that influence citizens attitudes and desire to recycle the waste. It was apprehended that fixed garbage fee reduces much more waste compare to weight-based garbage.

Table 6. Significant Relationship in the Level of Implementation and Extent of Implementation of Waste Management in terms of biodegradable, non-biodegradable and recyclable

	Extent of Implementation	Means	R-value	P-value	Interpretation
Level of Implementation of Waste Management	Biodegradable	4.098	.829	.000	Correlated
	Non-biodegradable	3.940	.501	.000	Correlated
	Recyclable	4.016	.437	.000	Correlated

*Significant level at @=0.05

The data are shown in Table 6, the result of Pearson R between the significant relationship on the level of implementation of waste management, and extent of implementation of waste management in terms of biodegradable, non-biodegradable and recyclable which shows a significant relationship in all aspects. With this, the reflected hypothesis is rejected based on the findings. The figure shows that biodegradable got the highest mean of 4.098 while non-biodegradable has a 3.940 mean. Biodegradable, with an r-value of .829 and p-value of .000, non-biodegradable with an r-value of .501, and p-value of .000 and recyclable, has r-value of .437 with a p-value of .000, which is lower than the alpha level of (.05). This indicates a correlation exists between the level of the implementation of waste management in terms of biodegradable, non-biodegradable and recyclable. This implies that the more extensive the implementation of waste management, the more it is highly appreciated and properly operational in the school campus.

The result was supported by (Sareen and Grandin 2020, 101–117); organizing committees and stakeholders can be advanced to better performance of solid waste collection, and segregation on the level of rag picker can be done. Similarly, the enormous perspective has been overlooked with due absence of doing some reuse or reprocessing firms for people’s approval. For urban sustainability initiatives with a extreme systematic and trans-local repercussions, it’s a must that cities should establish accountability systems that redefine the geographies of duty.

Table 7. Significant Difference in the Level of Implementation of Waste Management by Track

	Tracks	Means	F-value	P-value	Interpretation
Level of Implementation of Waste Management	GAS	3.680	1.326	.266	Not significant
	HUMSS	3.950			
	TVL	3.810			
	ABM	3.810			
	STEM	3.950			

*Significant level at @=0.05

As revealed in Table 7, the one-way ANOVA results on the significant difference on the level of implementation of waste management when categorized by track. The data show that the f-value of 1.326 and p-value of .266 indicate no significant difference in the level of implementation of waste in terms of track. Thus, the null hypothesis is accepted. HUMSS and STEM tracks got the highest mean of 3.950, while the GAS track had a 3.680 mean. Therefore, the level of implementation of waste management is not directly significant when categorized by track, and this implies that no matter what the students’ specialization is, it does not simply vary on how they follow the process and procedure of the extent of implementation of waste management in the school.

The finding was supported by (Alam and Ahmade 2013,165-168), and SB Mission 2016,1). To reduced waste in doing some waste reduction or minimization is a broader term that are inclusive of all the waste management techniques such as doing reduction, recycling, and composting method. To be able to minimize waste quantity for disposal and treatment plan or landfill is to increase recycling in every householder themselves which need to be exercised. Therefore, for it to be economically viable the practice will not only minimize the required landfill area but to emphasize waste reduction, reuse and recycling practice. Also, it will ensure the minimization of waste in its adverse impact of solid waste on human health and environment.

Intervention Program

Based on the findings, intervention programs or action plans, such as awareness seminars on proper waste management, and informational Campaigns on the latest waste management, can be designed. These programs are beneficial to everyone on the school campus as this will help them be updated with the latest developments on proper waste management in the school and how the school manages waste disposal properly. Also, this will give information on how functional the operation of waste management in the school is.

Action Plan

Objectives	Program /Projects	Strategies /Activities	Persons Involved	Time Framed	Resources Needed	Expected Outcomes
1. Conduct an Awareness Seminar on Proper Waste	Seminar-Workshop on proper waste management	Prepare a letter to conduct the seminar	School Admin, Staff and select	Yearly	Printed copy of the letter seminar matrix and	Outputs of the seminar workshop

Management		workshop -prepare the seminar matrix, assignment of different committees for the seminar workshop	Students		program funds	
2. Conduct an Informational Campaign on the latest updates on waste management	Informational Campaign on latest updates on waste management	Prepare a letter to conduct the informational campaign (offline/online) -program select participants for the campaign	School Admin, Staff and select Students	Yearly	Printed copy of letter for information campaign, offline/online resources for campaign	Outputs of informational campaign

CONCLUSION AND RECOMMENDATION

This study aimed to determine the implementation of waste management in Baliwasan Senior High School. Based on the findings, it is concluded that the level of implementation of waste management got a high mean and very high level in the disposal regulation. The extent of implementation of waste management in terms of biodegradable, non-biodegradable, and recyclable got a high mean, indicating a high extent of implementation. The significant difference in the level of implementation of waste management by tracks shows that there is no significant indication where HUMSS and STEM got the highest mean from the rest of the tracks. The significant relationship between the level of implementation of waste management and the extent of implementation of waste management indicates a significant correlation between biodegradable, non-biodegradable, and recyclable. Thus, a seminar-workshop and advertising campaign on the latest waste management implementation has been crafted as an action plan.

The researchers made the following recommendations which were formulated relative to the results and conclusions of this research. The school administrators may consider upgrading the operations and visibility of waste management in the school campus and develop proper seminars and campaigns to further develop the need to enhance the implementation. The teachers may be acquainted with the services and operation of the school in the implementation of waste management and be adequately informed about the seminars and activities aligned with it. The students will have an insight into the implementation of waste management in the school. They will be aware of the significance of proper waste disposal and how it benefits everyone. The community may understand the proper implementation of waste disposal in the vicinity and some updates on its development and maintenance. Future researchers may include other factors to consider in dealing with the environment as variables in the study and other relevant criteria in implementing waste management aside from those mentioned or used in this study.

Dissemination and Advocacy Plans

In conducting the dissemination and advocacy plan, it is by sharing the intervention program rationale on awareness seminar on proper waste management and an informational campaign on the latest waste

management that can be designed. The said programs align with the findings and conclusions recommended by the data in implementing proper waste management in the school campus. Vital information will be transcended as part of doing the advocacy plan reflected in the data of this research. Also, it will be presented to academic institutions for proper presentations both within and outside the community.

The end user and school stakeholders are those in the administration, school staff, teachers, the school community, and local policy advocates who will be part of the execution of its objectives and initiate necessary actions to address the issues identified in the community, such as the implementation of waste management. This activity can also be utilized to educate students and policy advocates on its impact and effects, especially regarding healthcare aspects. This can be improved depending on the needs and capacity of the school community. The advocacy plans will be a collaborative project of the school and the community and will be evaluated for its utilization and dissemination on the proper ways and methods utilized. Likewise, this will follow the reflected action plan initialized following the needs and the conduct of the said plans and expected outcomes.

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FINANCIAL REPORT

A. Supplies and Materials					
ITEM S	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT
1	3	Reams	A4 size s20 Bond Paper	200.00	600.00
2	2	Set	Cannon Computer Ink	1300.00	2,600.00
3	Binding Expenses				600.00
4	Internet loads				2000.00
5	Snacks for learners				2,000.00
6	Folders				200.00
7	Miscellaneous				1,000.00
Total					9,000.00
8	5% Contingency Fund				450
Grand Total					9,450.00

Research Instrument

PART I. Respondent's Profile

Name: _____ (Optional)

- Track
- ABM
- TEM
- GAS
- HUMSS
- TVL

PART II. Level of Implementation of Solid Waste Management

Directions: Below are constructs concerning the extent of implementation of solid waste management. Please read each item carefully and put a checkmark on your response. Please be guided by the following descriptions:

5 – Very high 4 – High 3 – Moderate 2 – Low 1 – Very Low

Level of Implementation of Waste Management	Level of Implementation				
	5	4	3	2	1
1. Prevention of waste generation.					
2. Minimization of waste or source reduction.					
3. Recycling and reuse of valuable materials.					

4.	Biological Treatment of waste in the school.					
5.	Landfill Disposal regulation on the school campus.					

PART III. The Extent of Implementation of Solid Waste Management

Directions: Below are constructs about the extent of implementation of solid waste management. Please read each item carefully and put a checkmark on your response. Please be guided by the following descriptions:

5 – Very high Extent 4 – High Extent 3 – Moderate Extent 2 – Low Extent 1 – Very Low Extent

A. Implementation of Waste Management in terms of Biodegradable	Extent of Implementation				
	5	4	3	2	1
1. Implements solid waste management in school.					
2. Has a systematic process in terms of biodegradable waste.					
3. Follows proper disposal of biodegradable waste.					
4. Establishes proper management and operation of biodegradable waste.					
5. Monitors the operation of biodegradable waste management in schools.					
B. Implementation of Waste Management in terms of Non-Biodegradable					
1. Devises non-biodegradable waste management in school.					
2. Has organized operation in terms of non-biodegradable waste.					
3. Tracks proper disposal of non-biodegradable waste.					
4. Establishes proper management of non- biodegradable waste.					
5. Improves the operation of non-biodegradable waste on the campus.					
C. Implementation of Waste Management in terms of Recyclable					
1. Uses waste materials to be more productive and innovative.					
2. Develops proper management of the waste to be recycled.					
3. Builds up recycled waste to make it worthwhile.					
4. Adapts a sense of innovation of the waste materials.					
5. Proper disposal or operation of the recycled waste.					

Respondent's Signature



INFORMED CONSENT FORM

Department of Education

Region IX, Zamboanga Peninsula

Division of City Schools

BALIWASAN SENIOR HIGH SCHOOL –STAND ALONE

San Jose Road, Zamboanga City

Tel No. 957-3739



May 2, 2023

Dear Respondent,

Greetings!

I am currently writing my basic Research study with the title. **“IMPLEMENTATION OF WASTE MANAGEMENT IN BALIWASAN SENIOR HIGH SCHOOL: BASIS FOR ACTION DESIGN”**. You are invited to take part in this research. It is my hope that this study will benefit you as a student. The objective of this study is to determine the level of implementation of waste management in Baliwasan Senior High School. This will also craft an action plan to reduce waste resources. There are no identified risks from participating in this research. There are no costs and no monetary compensation to you for your participation in this study.

Your participation in this research is completely voluntary and you may refuse to participate without consequence. Responses to the survey will only be reported in aggregated form to protect your identity. The collected data will be treated with the utmost confidentiality.

Sincerely yours,

ANTONIO T. SANSON

Researcher

JULIEFAY P. VALENCIA

Researcher

CONSENT:

By signing this consent form, I confirm that I have read and understood the information and have had the opportunity to ask question/s. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I voluntarily agree to take part in this study.

Respondent's Signature over Printed Name