



# International Journal of Research Publication and Reviews

Journal homepage: [www.ijrpr.com](http://www.ijrpr.com) ISSN 2582-7421

## Evaluating the Issues and Concerns Relating to Solid Waste Management in Elementary Schools

**Zenaida S. Taño**

Kamarahan Elementary School [zenaida.tano@deped.gov.ph](mailto:zenaida.tano@deped.gov.ph)

DOI : <https://doi.org/10.55248/gengpi.6.0425.16131>

### ABSTRACT

This study evaluated the issues and concerns of the Elementary Schools on Solid Waste Management particularly within Kidapawan City Division and 2<sup>nd</sup> Congressional District of Cotabato Province.

Utilized qualitative research design, particularly phenomenological approach, involving 20 participants, their responses were analyzed using thematic analysis. Based on the narrative results, teachers encountered issues and concerns in the implementation of solid waste management.

Generated global themes were attitude and behavior towards waste management; waste disposal practices and policy implementation; and poor stakeholders' support to waste management. Furthermore in addressing the raised issues and concerns, the following were the global themes generated; proper waste disposal advocacy and collaborating with stakeholders on waste management.

### INTRODUCTION

The magnitude of solid waste causes greater challenges that call for immediate action to reduce the amount of waste generated by the increasing population in the Philippines. Consequently, Filipinos are alarmed by the existing quality of the environment and take action to mitigate the threat of a failing healthy environment to meet the basic needs and desires crucial for the well-being of individuals and societies. Therefore, managing waste is a significant responsibility of schools.

In the context of Philippine cultures, Manalo (2022); and Ferronato and Torretta (2019) emphasized the persistent challenges in Solid Waste Management citing practices and the level of cooperation particularly in schools, where effective solid waste management serves as an indicator of governance and reform effectiveness. As reviewed, problems with solid waste management are weak implementation of proper waste disposal and inadequate solid waste management systems (Powell, 2018).

While laws like the Republic Act 9003 exist to regulate SWM practices in the Philippines, implementation gaps persist due to various factors. Addressing the challenges is crucial for achieving sustainable development goals and ensuring a healthier environment. Therefore, solid waste management must be executed with the knowledge of the principles of public health and other environmental considerations (Lalamonan & Comighud, 2020).

Moreover, Molina and Catan (2021) underscored the establishment of Materials Recovery Facilities (MRFs). However, challenges remain that include the lack of awareness and right practices in waste segregation although the Environmental Awareness and Education Act of 2008 required educational agencies to integrate environmental education at all levels.

Some studies exposed a high level of awareness and practices on solid waste management regarding segregation, reduction, and recycling (Paghasian, 2017) and the extent of solid waste management practices (Gequinto, 2016). However, a solid waste management study in basic education is limited, which remains a research gap despite the presence of laws and measures to address SWM concerns (Ferronato, & Torretta, 2019). Thus, this study will determine the level of solid waste management awareness and practices among Grade IV teachers about their actions in a wide range of activities highlighting its significance for environmental development (Powell, 2018).

### Theoretical Framework

This study is anchored on the Waste Management Theory (Mella & Pongracz, 2015). The Theory of Waste Management emphasizes the prevention of waste causing harm to human health and the environment. Further, it highlights the importance of defining waste accurately to construct a sustainable waste management agenda. The Theory of Waste Management is a unified body of knowledge about waste and waste management found on the expectation that waste management is to prevent waste from causing harm to human health and the environment and promote resource use optimization.



5. Makilala	507	4
6. Kidapawan City	741	4
<b>Total</b>	<b>2,495</b>	<b>20</b>

### Sampling Procedure

In the qualitative approach, it used a technique that intentionally involves the selection of participants with specific characteristics, knowledge, or experience related to the program (Nikolopoulou, 2023). This type of sampling is used to gain deep, rich, and detailed insights and information from the selected 20 participants.

### Data Gathering Procedure

Permission to conduct the interviews was included in the letter provided to the participants. Additionally, the researcher obtained approval from the school heads to carry out the interviews. Upon receiving this approval, interviews using the structured questionnaire was conducted.

### Data Gathering Procedure

In the process of gathering data for the variables being included in this study for conduct, the researcher prepared a letter addressed to Regional Director and furnish a copy to the Schools Division Superintendent of each selected division signifying the intent to conduct such study. Further, it covered permission to gather data from the respective respondents stating therein the purpose of conducting the presented study.

Subsequently, the researcher took the letter approved by the SDS and noted it by the school principal to the participants of the study to start the data-gathering process through one on one interview.

### Data Analysis

Qualitative Analysis of the data gathered through interview and written comments from the questionnaire were interpreted using thematic analysis. Qualitative analysis methods can provide deep insights, and therefore provide the designer with a better understanding for the researched topic (Barnham, 2015).

### Role of the Researcher

The researcher's job is to identify the participants from the 2<sup>nd</sup> Congressional District Municipalities and Kidapawan City and were identified based on the criteria established. Before the primary collection of data, the participants were oriented the study's goals and objectives. They were also be requested to sign a consent of participation form for the study.

The researcher kept track of the participant's responses. She gave the participants the option of responding using their mother tongue, Filipino or English language. The language expert then verified the transcription of the content and format, to be followed by the analysis of their responses.

## RESULTS AND DISCUSSIONS

This chapter contains some related studies and literature on the study, which provide important concepts and ideas for the study's development on solid waste management.

### Issues and Concerns in Solid Waste Management in Elementary Schools

The issues and concerns surrounding SWM in schools are multi-faceted and understanding these can help in developing effective solutions for waste reduction and management.

Table 2 shows the themes and core ideas describing the issues and concerns on solid waste management in elementary schools. These are presented through the global themes such as attitude and behavior towards waste management; waste disposal practices and policy implementation; and poor stakeholders' support to waste management. These are discussed in the succeeding sections:

### Attitude and Behavior Towards Waste Management

The attitude and behavior towards waste management among teachers, learners, and other stakeholders. This issue and concern is manifested through wrongly practiced waste disposal, lack of discipline on garbage disposal and lack of awareness on garbage management.

**Wrongly practiced waste disposal.** One of the attitudes contributing to issues and concerns on waste management is wrongly practiced waste disposal. Learners and even teachers are throwing their garbage without segregating these and putting these in the right trash bins. As verbalized by one of the participants:

*...in the school are the pupils throwing their garbage everywhere. in the playground, pathways, even inside the classroom. KII6*

Similarly, a key informant shared that...

*"... First, is the proper waste segregation wherein their only concern is to throw their garbage without proper segregation. Second, there are still pupils who are not concerned with their garbage even though proper dissemination was already given to them." KII7*

As narrated by a teacher-participant during the in-depth interview, she emphasized that there wrong practice on dumping collected wastes in any part of the school.

*"Wastes from MRF are not being collected by the BLGU and disposal of these wastes are being dumped in school pit only." KII12*

Findings imply that there is an improper waste disposal practice in the elementary schools which is a critical issue. The way waste is handled, disposed of, and treated in educational institutions can have long-term consequences on the environment, public health, and the development of responsible waste management practices among students.

In support to the findings, Gupta and Bhargava (2017), improper waste disposal practices in schools significantly contribute to environmental pollution, especially when recyclable or compostable materials are mixed with non-recyclable waste. Improper segregation of waste leads to increased landfill burden and long-term environmental issues.

**Lack of Discipline on Garbage Disposal.** On this issue and concern many individuals are not adequately educated on the importance of proper waste disposal and the consequences of improper disposal. Narrated by the participants, students lack of discipline in throwing their garbage anywhere and when they see scattered pieces of garbage found in their school surroundings they are not picking it.

*"One of the major issues in solid waste management (SWM) in our school is the lack of discipline in proper waste disposal." KII6*

*"Pupils throw their garbage everywhere." KII8*

*"Pupils were not responsible enough of their own trash. They just simply throw it after eating." KII9*

The issue of inadequate discipline in garbage disposal has become an urgent concern and it not only affects the environmental sustainability of communities but also poses serious public health risks. The lack of discipline in waste management can be attributed to various factors such as poor awareness, weak enforcement of regulations, lack of proper infrastructure, and socio-economic conditions.

Additionally, the result implies that the lack of discipline in garbage disposal is a complex problem that requires a multifaceted approach to resolve. Research consistently points to the need for greater public awareness, better infrastructure, and stronger enforcement of regulations.

It corroborates with the study of Williams et al. (2019), it consistently emphasizes the need for education and awareness campaigns to improve waste management practices. In a comparative study between urban and rural areas, they found that rural communities were more likely to improperly dispose of waste due to a lack of access to educational resources.

**Lack of awareness on garbage management.** On the issue of learners and even some teachers were lack of awareness on garbage management. Informants narrated that there was improper waste management and lack of plans on how garbage are dealt with. This was supported by the following responses from the participants:

*"One of the pressing issues in solid waste management (SWM) in our school is the improper segregation of waste. Many students and even some teachers are not fully aware of the correct way to separate biodegradable, non-biodegradable, and recyclable materials. This leads to mixed waste, making it difficult to dispose of properly." KII3*

*"Some common pressing issues include insufficient waste segregation, inadequate waste disposal facilities, and a lack of awareness among students about proper waste management practices. Schools also face challenges in managing non-biodegradable waste and coordinating recycling efforts effectively." KII5*

The issue of garbage management remains complex, and a lack of awareness plays a central role in hindering effective solutions. As demonstrated through the research implications and related literature, addressing this challenge requires a multi-pronged approach involving education, behavioral change, community participation, and policy reform. Expanding public awareness through media campaigns, public education, and community involvement can help foster a more sustainable approach to waste management, ultimately contributing to better environmental and public health outcomes.

Studies indicate that lack of awareness about the environmental impact of improper waste disposal directly correlates with poor waste management behavior. Research by *Singh & Jain (2019)* suggests that without sufficient education, individuals continue to dispose of waste improperly, contributing to pollution and inefficiency in recycling systems.

### **Waste Disposal Practices and Policy Implementation**

The waste disposal practices and policy implementation among the elementary schools covered in the study have not properly implemented by the school management. This issue and concern is manifested through unimplemented policies on waste management, lack of policy on waste management, absence of waste disposal schedule, and lack of waste collection practices.

**Unimplemented policies on waste management.** In the Philippines, while several policies have been enacted to address waste management, many remain unimplemented or face significant challenges in execution. These unimplemented policies on waste management contributes to the ongoing waste management problems, especially in areas like elementary schools and local communities. Noticeable in the responses of the informants that in their schools the national or local policies on waste management are not properly implemented and there was a lack of reviews of these policies that makes the school encountered challenges on its implementation.

*"Some common pressing issues include insufficient waste segregation, inadequate waste disposal facilities, and a lack of awareness among students about proper waste management practices. Schools also face challenges in managing non-biodegradable waste and coordinating recycling efforts effectively." KII5*

*"Some students and teachers are not fully aware of the importance of waste segregation and recycling. Without proper support, education, and facilities, schools find it difficult to fully follow the solid waste management rules." KII20*

National policies like the Ecological Solid Waste Management Act of 2000 (Republic Act No. 9003) may not be adequately enforced at the local school level. Schools might not comply with regulations regarding waste management practices.

It means that solid waste management (SWM) in elementary schools is an important issue, as it affects both environmental sustainability and the well-being of students and staff. Proper waste disposal and management in schools not only address environmental concerns but also serve as an opportunity for educational institutions to foster a culture of sustainability and environmental responsibility among young learners.

**Lack of policy on waste management.** One of the major issues resulting from the lack of policy is the **inconsistent implementation of waste management practices across schools**. The absence of a clear, formal policy on waste management in elementary schools remains one of the significant barriers to effective Solid Waste Management (SWM) practices. As shared by the key informant during the in-depth interview, schools have no established policies on SWM as well as waste management plans are not visible in schools.

*"Lack of awareness programs that teach students the importance of reducing, reusing, and recycling. Without proper education, facilities, and discipline, maintaining an effective SWM system in the school remains a challenge because the school don't have established policies." KII19*

*"Lack of trash bins in classrooms and outdoor areas, causing some students to throw their garbage anywhere. Additionally, garbage collection is not always regular, resulting in waste piling up and creating an unpleasant and unhealthy environment. There is no waste management plans established in the school." KII14*

Narrations of informants convey that policies are essential for creating structured frameworks for waste management in schools. However, without established and well-defined policies, schools may not effectively address waste segregation, reduction, or recycling.

**Absence of waste disposal schedule.** One of the practices contributing to issues and concerns on waste management implementation practices is the absence of waste disposal schedule. As expressed by one of the key informants, the school don't have schedule for the collection of garbage;

*"Improper waste segregation, lack of waste disposal facilities, irregular waste collection and lack of student and teacher engagement." KII2*

*"Lack of trash bins in classrooms and outdoor areas, causing some students to throw their garbage anywhere. Additionally, garbage collection is not always regular, resulting in waste piling up and creating an unpleasant and unhealthy environment. There is no waste management plans established in the school." KII14*

*"Limited number of trash bins, making it hard for students to dispose of waste properly, especially in outdoor areas. Sometimes, garbage collection is delayed, causing waste to accumulate and attract pests." KII18*

**Lack of waste collection practices.** Another practice of the school that contributes to the issues and concerns on waste management implementation practices is the lack of waste collection practices. As expressed by the key informants, the school doesn't have proper collection garbage practices.

*"There is poor waste collection and disposal system." KII12*

*"The problem faced in our school is the irregular collection of garbage, which can lead to a dirty and smelly environment. In some cases, students and school staff do not take waste management seriously, leading to improper disposal of trash. Without proper awareness, facilities, and support, schools struggle to fully implement solid waste management*  
*"...Additionally, garbage collection may not be regular, causing waste to pile up and create an unhealthy environment. In some cases, students and staff are not fully aware of their role in keeping the school clean. Without proper education, resources, and regular waste disposal, schools struggle to follow the mandated waste management practices effectively." KII18*

In addition, there was lack of trash bins for garbage collection and segregation, students are not oriented on how their classroom garbage can properly collected or disposed, and no designated areas as garbage collection station or area. These are very evident in the narrations of the participants below:

*"One issue is the lack of waste bins in classrooms and outdoor areas, making it difficult for students to dispose of trash properly. We also do not have enough educational programs to teach students and teachers about waste segregation and recycling.." KII16*

*"Proper waste segregation and proper disposal. No proper orientation as to where garbage be collected." KII8*

*"There is no person assign to monitor all classes in the implementation and proper use of the segregation of waste management. No identification and safe storage of hazardous materials resulting from the materials used inside and outside the classroom." KII6*

#### **Poor Stakeholders' Support to Waste Management**

The poor stakeholders' support to waste management as one of the issues and concerns in the implementation of solid waste management in the Elementary Schools is very evident in the schools included in the study. It can be apparently obvious in the following: learners' lack of education and training on waste disposal and community behavior on waste management.

**Learners' lack of education and training on waste disposal.** On this issue and concern, there is absence of orientation for learners on garbage management and school policies on garbage management and collection. Key informants, presented during the in-depth interview that ...

*"The issues with the responsiveness of elementary schools toward mandated solid waste management practices are multifaceted and likely include a lack of resources, limited awareness and training.." KII11*

*"We also do not have enough training or programs to educate students and teachers about the importance of proper waste management. Additionally, garbage collection may not be regular, causing waste to pile up and create an unhealthy environment..." KII18*

**Community behavior on waste management.** The last basic theme or organizing theme under the poor stakeholders' support to waste management is the negative community behavior on waste management. Manifest from the messages of the participants during interview, they shared that dumping of waste anywhere is not their concern.

*"Ang isyung kinakaharap ng paaralan sa pagsunod sa itinakdang patakaran ay ang mababang pakikilahok ng mga mag-aaral. Maraming mga estudyante ang hindi seryoso sa pagsunod ng waste management." (The issue that the school is facing is the low adherence of the students on the policies of waste management. Many students don't take waste management policies seriously.) KII19*

*"Despite of the Slogan: "Basura Mo; Sagot Mo" still plastics/other garbage's scattered anywhere in and out of the school premises." KII9*

**Table 2** Themes and Core Ideas on the Issues and Concerns in Solid Waste Management in Elementary Schools

Global Themes	Basic Themes	Core Ideas
Attitude and Behavior Towards Waste Management	Wrongly practiced waste disposal	Unsegregated waste in the trash cans --Dumping collected wastes in any part of the schools
	Lack of Discipline on Garbage Disposal	--Throwing garbage anywhere Not picking on pieces of garbage when found in the surroundings
	Lack of awareness on garbage management	Improper waste management Lack of plans on how garbage are dealt with
Waste Disposal Practices and Policy Implementation	Unimplemented policies on waste management	National or local policies on waste management are not implemented in schools. --Lack of reviews of these policies for school implementation
	Lack of Policy on waste management	Schools have no established policies --Waste management plans are not established in schools
	Absence of waste disposal schedule	No schedule for garbage collection
	Lack of waste collection practices	--No coordination with the stakeholders on proper waste collection in school --Lack of trash bins for garbage collection and segregation --Students are not oriented on how their classroom garbage can be properly collected or disposed --No designated area as garbage collection station or area
Poor Stakeholders' Support to Waste Management	Learners' lack of education and training on waste disposal	Absence of orientation for learners on garbage management and school policies on garbage management and collection
	Community behavior on waste management	Dumping of waste anywhere is not their concerns