

Communication Management of the Waste Management Movement in Cokrodiningratan Village, Yogyakarta City Year 2023

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Abstract

Garbage is a major problem in Yogyakarta City. Cokrodiningratan Village has a waste management program that involves the community. Effective communication management is the key to the success of the program. This study aims to analyze communication management in the waste management movement in Cokrodiningratan Village, Yogyakarta City, in 2023. Using a qualitative approach, this study explores strategies, policies, and implementation of communication used by related parties in managing waste at the village level. Through in-depth interviews with stakeholders as well as direct observation, this study explores the role of communication in raising public awareness and participation in the waste management movement. There are several communication channels used: such as Regular meetings: socialization, and education to the community about waste management. Social media: dissemination of information and announcements related to waste management programs. Banners and posters: visual information media to increase public awareness. Effective communication management is the key to the success of the waste management movement in Cokrodiningratan Village. Efforts are needed to improve the quality of communication and build active community participation in protecting the environment. The results of this study are expected to provide deep insight into the importance of effective communication management in supporting the success of waste management programs at the local level. This research shows that communication management in the waste management movement in Cokrodiningratan Village is quite good.

Keywords: *Communication Management, Waste Management, Cokrodiningratan Village.*

A. INTRODUCTION

The waste problem in Yogyakarta has reached a crisis level, especially after the closure of the Piyungan landfill in May 2024 (Pertana, 2024). This closure creates a high urgency to develop effective community-based waste management strategies, given that landfill capacity has exceeded its maximum limit and local governments now require districts/cities to manage waste independently (Ramadhanti & Aminatun, 2025). This challenge is exacerbated by people's habit of littering, indicating low collective awareness (Pertwi & Mustika Sari, 2023). If not addressed, this has the potential to trigger environmental and public health crises, such as groundwater pollution, the spread of disease, and a decline in quality of life (World Bank, 2021). In contrast, Japan is a successful waste management country, where about 65% of the total municipal waste is recycled through incineration. At the same time, the share of recycled waste has increased to 17%, and waste landfilled in landfills has decreased to 18% (Zakleka & Mochuk, 2021).

Given this problem, the government has a waste bank program to address it. Law No. 18 of 2008 on Waste Management provides the basis for establishing waste

banks. This law stipulates that the paradigm of waste management should be shifted from waste collection to source reduction and resource recycling. Waste banks are part of the 3R (*Reuse, Reduce, Recycle*) approach to managing waste at the local level. According to the Regulation of the Indonesian Minister of Environment Number 13 of 2012, a waste bank is a place for collecting and sorting waste that can be recycled, reused, and has economic value (Christian et al., 2020; Masruroh et al., 2021).

Waste banks are a crucial solution in this context, but their success is highly dependent on effective communication management. Recent studies have shown that community participation in waste management programs is only optimal when accompanied by inclusive and adaptive communication strategies (Rina Susanti & Susi Evanita, 2022; Sidharta et al., 2021). However, in Cokrodiningratan Village, waste management is dominated by generation X and baby boomers aged 45-68 years, who tend to be less exposed to digital media (Anderson & Perrin, 2017). This poses its own challenges, considering that modern technology-based communication such as social media is the main channel for information dissemination in the digital era (Nguyen, 2023). This research is urgent to identify the communication channels that best suit these demographics, while ensuring the sustainability of the waste bank program.

So far, 575 Waste Banks have been registered in 45 urban villages and 14 Kemantren in Yogyakarta City. To help supervise and assess each Waste Bank unit in the area, the Yogyakarta City Government, through the Environmental Agency, established an independent waste management Village Facilitator and Kemantren Coordinator (Yogyakarta City Environmental Agency, 2023). With the existence of waste banks that have spread in several villages, currently Cokrodiningratan Village has 15 waste banks spread in each RW. This shows that Cokrodiningratan Village has good potential in managing waste (Website of Cokrodiningratan Village, 2023). This is an interesting subject to research.

This research aims to analyze the communication management of the waste management movement in Cokrodiningratan Village, Yogyakarta City in 2023. This research uses the concept of communication management from Dow & Taylor (Dow & Taylor, 2008). According to Dow and Taylor (2008), communication management is a crucial aspect of any project as it covers the entire communication process between project implementers and stakeholders, from the planning stage to the final evaluation. Structured communication enables a smooth flow of information, mutual understanding, and active participation from all parties involved. This perspective is further strengthened by Ball-Rokeach and Kim's *Communication Infrastructure Theory* (CIT) approach, which sees communication as a network of resources embedded in community life through environmental storytelling (STN) and communication action context (CAC). STN consists of interpersonal interactions, local media and community organizations that build shared narratives as the foundation of citizen engagement, while CAC describes the social conditions that influence the effectiveness of such communication networks (Yong-Chan Kim & Sandra J. Ball-Rokeach, 2006). When Dow & Taylor's communication management theory is

combined with the communication infrastructure framework, it becomes clear that the success of the waste management movement at the local level depends not only on the project's internal and external communication strategies, but also on how strong and connected the community communication network is as the main medium for building sustainable civic participation.

The urgency of this research is also related to global commitments in the Sustainable Development Goals (SDGs), specifically Goal 11 Sustainable Cities and Goal 12 Responsible Consumption and Production. Failure to optimize waste management at the local level can hinder the achievement of the target of reducing waste generation by 30% and increasing recycling by 70% by 2025, as mandated in Presidential Regulation No. 97/2017 (UNDP, 2023). In addition, the findings of this study can serve as a reference for other regions in Indonesia that are facing similar problems, especially in the context of the transition from a centralized to a decentralized waste management system (Rosyida, 2021).

This research also explores the role of the waste management movement on community awareness and analyzes what communication channels are most effective for the community such as regular meetings: socialization, and education to the community about waste management, social media: dissemination of information and announcements related to waste management programs, banners and posters: visual information media to increase community awareness.

The waste managers in Cokrodingratan village are dominated by generation X and baby boomers, whose average age is 45-68 years old. So that this has an impact on access to pages and social media used by the waste management movement in maximizing the communication management process. The results of the study are expected to provide deep insight into the importance of effective communication management in supporting the success of waste management programs at the local level.

Previous studies such as (Maharani et al., 2018 & Zamzami Elamin et al., 2018) have identified limited facilities and public awareness as barriers to waste management. However, no research has specifically examined the role of communication management in overcoming generational and digital challenges at the urban village level. Thus, this research is not only practically urgent but also provides an academic contribution in filling the literature gap on inclusive communication strategies in community-based waste management.

B. METHODS

This research uses qualitative methods. Qualitative research is research that intends to understand the phenomenon of what is experienced by the research subject, for example behavior, perception, motivation, action and others holistically and by means of descriptions in the form of words and language, in a special natural context and by utilizing various methods (Barlian, 2018 dalam Hasan, 2022). Qualitative research data is data in the form of words, sentences, paragraphs that

have meaning related to research. Examples are data on community responses (Nasution, 2023).

This qualitative research emphasizes narrative descriptions of the results of its research, where this research is in-depth, flexible and interpretative and this research seeks to explore and understand deeply the roots of existing problems, in order to offer the best solution to each problem (Waruwu, 2024). In qualitative research, researchers act as human instruments and use data collection techniques such as participant observation, in-depth interviews and documentation studies. Therefore, qualitative researchers must interact with data sources, so they must get to know the people who provide the data (Sugiyono, 2013).

By using a case study approach, this research can provide answers to the problems that exist in Yogyakarta. A case study is an approach that centers on a particular "case"; researchers are encouraged to look for a case to analyze that is related to the myth or that occurs at the research location. Researchers are required to conduct a holistic analysis and describe comprehensively (Creswell, 2015). The data is obtained from the results of interviews, as for the sources determined in this research as follows: (a). Andityo Bagus Baskoro, as the Head of Cokrodiningratan Village, (b). Koespilah as the Chairperson of the Cokrodiningratan Village Waste Bank Forum for the 2023 period, (c). Siti Fatimah as Secretary of the Waste Bank Forum for the 2023 period, (d). Devi Handayani as the Public Relations Officer of the Cokrodiningratan Village Waste Bank Forum for the 2023 period, (e). Siti Masamah, Fany Christina, and Yoyo as residents of Cokrodiningratan Village.

Table 1. Informants

No	Name	Gender	Age	Generation
1	Andityo Bagus Baskoro	Male	38	Y
2	Koespilah	Female	65	Baby Boomers
3	Siti Fatimah	Female	58	Baby Boomers
4	Devi Handayani	Female	52	X
5	Siti Masamah	Female	58	Baby Boomers
6	Fany Christina	Female	50	X
7	Yoyo	Male	57	Baby Boomers

This research was conducted from February 20, 2024 - June 15, 2024. Data collection techniques were conducted through in-depth interviews with the concept of semi-structured interviews: These interviews included questions to which participants could respond freely. Followed by follow-up questions and probing based on the question plan or on the participant's responses (Bastian, 2018). Then there is observation, which is carried out by observing the situation in the Cokrodiningratan Village area. In addition, researchers also get data from documentation obtained from observations, through direct observation, archives from the secretary of the waste bank forum and archive documents from Cokrodiningratan Village social media.

C. RESULTS AND DISCUSSION

According to the Ministry of Environment and Forestry, the main source of waste in Yogyakarta City is household waste, which accounts for 55.2%. The waste problem in Yogyakarta City is increasingly complex because the Piyungan Integrated Waste Management Site (TPST) is no longer able to accept waste generated by residents of Yogyakarta City. This must be resolved through waste management directly from the source, namely household waste (Kusuma, 2024). According to Biodiversity Warriors, the movement to prevent, sort and process waste is a movement adapted from the simple concept of the 3R (*reduce, reuse, recycle*) to help people live and implement a lifestyle of reducing waste more easily (Pratiwi, 2023). This is related to the waste management movement, which formed the Waste Bank Forum. Koespilah as the head of the Cokrodiningratan Village Waste Bank Forum stated that the waste bank forum was already running around 2010, but it has not yet developed as it is today. This waste bank forum has a role to invite and socialize related to proper waste management.

"We as administrators always invite and always communicate by always telling that proper waste management can increase the community's economy" (Interview, April 21, 2024).

According to Koespilah, in 2023 the waste management movement in Cokrodiningratan Village has developed a lot:

"Alhamdulillah, at the beginning of 2023 there were many additions of waste banks and new members, with the existence of zero inorganic waste, and the provision from DLH that the Piyungan landfill will be closed so that there must be a mandatory waste reduction socialization, and at the end of December to January there were many new waste banks, which initially 11 RW only had 10 waste banks, increasing to 15 waste banks" (interview, 21 April 2024).

The following is data on the name of the Waste Bank in Cokrodiningratan Village:

Table 2. Name of Waste Banks in Cokrodiningratan Village

No	Waste Bank Name	RW
1.	Sidodadi Waste Bank	01
2.	Mawar Waste Bank	02
3.	Dadimulyo Waste Bank	03
4.	Garbage Bank Kantong Rejeki	04
5.	Tentrem Waste Bank	05
6.	Arto Moro Garbage Bank	06
7.	Bank Sampah Sejahtera	06
8.	Guyup Rukun Garbage Bank	06
9.	Lawoh Jitu Garbage Bank	07
10.	Dahlia Waste Bank	07
11.	Ngesti Mulyo Waste Bank	08
12.	Rogo Green Waste Bank	08

13.	Cokro Asri Waste Bank	09
14.	Bumi Lestari Waste Bank	10
15.	Bawono Langgeng Garbage Bank	11

Source: Cokrodiningratan Village Website

Andityo Bagus stated that the development in 2023 began with the issuance of the Mayor's Circular on GZSA (Zero Inorganic Waste Movement) on December 12, 2022, followed by a socialization event in Cokrodiningratan Village on December 23 with the Environmental Agency (DLH) and Kemantren Jetis (Interview, April 26, 2024). GZSA aims to reduce the amount of waste sent to the Piyungan Integrated Waste Processing Site (TPST) (Nariswari, 2023).

The researcher analyzed communication management within the Waste Management Movement in Cokrodiningratan, which includes communication planning, information distribution, performance reporting, and managing communication with stakeholders (Dow & Taylor, 2008). Based on this communication management concept, there are several stages in building effective communication, which will be discussed in the following section.

1. Communication Planning

Communication planning is the process of apportioning communication resources to achieve organizational goals. These resources include not only interpersonal communication and media, but also any activity intended to change behavior and cultivate certain skills among individuals and groups in accordance with organizational responsibilities (Cangara, 2017; Nariswari, 2023). Andityo Bagus stated that there is communication planning in developing a well-structured Waste Management Movement.

"We have a plan in making information distribution well and structured such as direct communication with community leaders, cadres of waste bank activists, socialization, training, banners/posters, then there are social media such as WhatsApp groups, Instagram and websites" (Interview with Andityo Bagus, April 26, 2024).

Similarly, Koespilah stated that information dissemination in Cokrodiningratan Village has been running well and in a structured manner, especially through WhatsApp groups, regular meetings of the Waste Bank Forum, socialization activities, and banners. The WhatsApp group is actively used to share information such as the operational schedule of the waste bank and any changes related to waste management, which is then passed on by neighborhood leaders to residents, including those who do not have mobile phones (Interview, April 21, 2024).

This has fulfilled the context of communication planning which is an effort to organize communication in such a way (Dow & Taylor, 2008) The waste bank forum and village officials have planned the strategies in the waste management movement in Cokrodiningratan village related to socialization, communication flow and other waste management activities, and in accordance with the planning model proposed by Philip Lesly. This model consists of two main components, namely the

organization that drives the company's CSR activities and the public who are the targets of activities and also the actors of activities (Nizam & Yasir, 2022). This is based on the waste bank forum that drives the activities of the Cokrodingratan urban village and the community in which it is the target of activities and the actors of communication activities.

2. Information distribution

Information distribution is done to determine the distribution of necessary information and provide it to the right team members and stakeholders (Dow & Taylor, 2008). The distribution of information carries out an existing communication plan. Based on communication planning, Cokrodingratan Village distributes information through social media, direct face-to-face communication in the form of regular waste bank forum meetings, socialization and training, and printed media such as banners/ posters. Cokrodingratan Village and the Waste Bank Forum distribute information through several communication channels as follows:

a. Social Media

The development of digital media allows individuals to form virtual communities with shared goals, including social movements (Nasrullah, 2013; Putri, 2022). Social media is an effective tool for sharing information, collaborating, and building relationships (Tjhin, 2022). Through social media, Cokrodingratan Village can more easily distribute information about the Waste Management Movement to the Waste Bank Forum and the community.

1). Instagram

Instagram can not only be used to share photos and videos about user activities, but can also be used by individuals and groups to share ideas or ideas with the community (Purba, 2023). Instagram basically makes it easier to disseminate existing information, but not everyone, especially the people of Cokrodingratan village, knows and has this application.



Figure 1. Instagram Account of Cokrodingratan Village

Source: Instagram @kel.cokro (05/15/2024)

Fany Christina stated that she did not know that there was an Instagram account in Cokrodingratan Village. *"I don't know about Instagram because I never open Instagram"* (Interview with Fany Christina, April 20, 2024).

In contrast, Siti Masamah stated that she was aware of the existence of Instagram in Cokrodingratan Village but felt that it was more intended for the younger community. *"Instagram exists but it is for the young people, because for mothers who are over 55 years old, most of them do not know how to use Instagram,"* (Interview with Siti Masamah, April 20, 2024).

The interview results show that the use of Instagram by Cokrodingratan Village as a media for socializing waste management has not been effective, because some residents do not know or have never accessed it. In fact, Instagram as a mass media should convey information in two directions between communicators and communicants so that communication is effective (Triaputri, 2022).

2). Website

A website is a collection of pages that are stored on the internet and can be accessed or viewed on devices that have an internet connection and aim to load existing information. Just like a computer. In the computer world, "global web" is a simplified term for "web", which is part of the Internet technology (Bastian, 2018).



Figure 2. Cokrodingratan Village Website
Source: Cokrodingratan Village Website (21/04/2024)

Kelurahan Cokrodingratan uses a website to disseminate information on waste management and other activities. However, there are still residents who are unaware of its existence. Yoyo and Fany Christina, who are around 50 years old, admitted that they do not know and are not interested in social media such as Instagram and websites (Interview, April 22, 2024). Researchers concluded that the website is less effective as a communication medium, this is also based on its purpose, which is to facilitate access to information for the public.

b. Banners/posters

Communication media such as banners or posters play an important role in disseminating information (Prasanti, 2018). Cokrodingratan Village uses this media to socialize waste management, but the distribution is uneven. According to Siti Fatimah, the number of banners/posters is small because they are easily damaged and lost, so they are considered less effective in raising public awareness.



Figure 3. Banner about the waste management movement

Source: Personal Documents (20/04/2024)

Researchers found several banners socializing waste management in Cokrodingratan Village that contain information on waste sorting and calls for environmental awareness, but they are not evenly distributed. According to Fani Christina, posters are only available during events and many are now damaged because they are only installed during events (Interview, April 20, 2024). This shows the need for efforts to increase the visibility and availability of more effective information media.

c. Direct communication

Direct communication is a communication process that is carried out directly without the help of third-person intermediaries or existing communication media and is not limited by distance (Damayani Pohan & Fitria, 2021). In creating effective communication, Cokrodingratan Village and the Waste Bank Forum communicate directly with the community regarding the existing waste management movement. The direct communication is as follows:

1). Socialization

Socialization has a very important meaning in the formation of individuals as effective members of society.(Rahmadina et al., 2024). This socialization aims to increase the understanding and awareness of the community in managing waste. Cokrodingratan Village conducted a socialization on proper waste management.



Figure 4. Socialization of Waste Management Regional Regulation for Cokrodiningratan Kadarkum

Source: Cokrodiningratan Village Website (22/04/2024)

This was conveyed by DLH Yogyakarta City that every household should reduce the use of disposable plastic items and use inorganic waste that can be reused, sort organic, inorganic, residual, and B3 waste, and carry out the Mbah Dirjo Movement (Regular Biopori, Jumbo Biopori and Emergency Biopori), Pay Waste Retribution to DLH Yogyakarta City (Cokrodiningratan Village Website).

Devi Handayani as the Public Relations Officer of the Waste Bank Forum stated that the socialization from the village aims to build community awareness in managing waste properly.

"Socialization from the Kelurahan is aimed at building community awareness, I as a public relations officer only help to convey information" (Interview, 25 April 2024).

In addition to the socialization held by the urban village, the Waste Bank Forum also conducted socialization related to waste sorting in each Waste Bank in RW. Siti Fatimah stated that the Waste Bank Forum also conducted socialization directly to residents of Cokrodiningratan Village, this socialization was carried out when someone opened a Waste Bank in each RW.

"So later we have socialization, we have data on which Garbage Bank from RW is open this week, later we socialize there, then we give examples of how to sort waste properly and correctly". (Interview, 24 April 2024).

Through the interviews that have been conducted, it can be seen that the village socialization, especially through the Waste Bank Forum, plays an important role in providing direct education about waste segregation to residents.

b. Regular meetings

Regular meetings related to the waste management movement are held to evaluate the activities that have been carried out so that the next activities can be better in the future (Putra & Ismaniar, 2020). This is done by the Waste Bank Association Forum to build good communication among members and also to overcome problems related to the waste management movement in Cokrodiningratan village.



Figure 5. Regular Meeting of the Waste Bank Association Forum

Source: Personal Documents (24/04/2024)

According to Siti Fatimah, the regular meetings of the Waste Bank Association Forum are held on a scheduled basis. In the past, regular meetings of the Waste Bank Forum were held once a month, but due to the busy schedules of the Forum members, in 2023 they were held every 2 months.

"We have regular meetings specifically for the Waste Bank Forum, we meet every two months on the 3rd week for the date itself we are not sure because we adjust to other schedules, what is certain is that we always meet on the 3rd week of each month" (Interview, April 24, 2024).

Through interview analysis, researchers found that the regular meetings of the Waste Bank Forum are an innovation in realizing a more structured and better managed waste management movement, and can build community awareness in managing waste properly.

c. Training

Training activities are carried out to develop the Waste Management Movement in Cokrodiningratan Village, with this

training, it can provide an understanding for the community how important a Waste Management Movement is. Devi Handayani stated that there are several trainings held by Cokrodiningratan Village in developing the Waste Management Movement.

"We also have training courses such as waste recycling training and organic waste management training" (Interview, April 25, 2024).

One example of training conducted is as follows:



Figure 6. Organic Waste Management Training

Source: Cokrodiningratan Village Website (22/04/2024)

The organic waste management training in Cokrodiningratan Village involved representatives from 57 RTs with the aim of equipping residents to face the closure of the Piyungan Regional Landfill starting January 2024. The trainees were expected to spread their knowledge to local residents so that they can manage household waste independently. They also received materials such as EM4, stockpile buckets, and jumbo biopores to support organic waste management practices. Considering that 60% of household waste is organic (Cokrodiningratan Village website), this training is an important step in building community awareness to manage waste properly.

3. Performance reporting

According to the concept of communication management, performance reporting measures the effectiveness of communication channels (Mingkid, 2017). In Cokrodiningratan Village, reporting is conducted through interviews, observations, documentation, and analysis to identify the most effective channels for promoting the Waste Management Movement. The results show that face-to-face communication and WhatsApp are considered the most effective, according to Andityo Bagus.

"I think the most effective is face-to-face communication and WhatsApp. Because both channels make it easier to disseminate information related to waste management". (Interview, April 26, 2024)

Interviews with Koespilah, Siti Fatimah, Siti Masamah, Devi Handayani, Fani Christina, and Yoyo showed that the most effective communication channels in waste management are direct communication and structured WhatsApp groups. The researcher's observation of the neighbourhood of Cokrodiningratan also shows that although there are many narrow alleys, the cleanliness of the area is maintained, reflecting the effectiveness of the communication channels used.



Figure 7: Road Conditions In Cokrodiningratan Village

Source: Personal Documents (21/04/2024)

In addition to having a fairly clean village, researchers also found many handicrafts from recycled used bottles, many houses that installed crafts from used bottles, starting to be used as lamps or home decorations. This reveals that the Waste Management Movement in Cokrodiningratan Village is more organized and structured.



Figure 8: Recycling Bottle Waste

Source: Personal Documents (21/04/2024)

Not only that, Cokrodiningratan Village also won 12 awards in the Yogyakarta City Environmental Award 2023. The data of the awards achieved are as follows:

Table 3. Cokrodiningratan Village Awards in 2023

No	Awards
1.	Cokro Asri Waste Bank RW 09: 1st runner-up in Waste Bank Yell Competition
2.	Cokro Asri Waste Bank RW 09: 1st runner-up in Waste Bank Yell Competition
3.	Bumi Lestari Waste Bank RW 10: 1st Place in the Waste Bank Competition for Processing Organic Waste
4.	Bumi Lestari Waste Bank RW 10: Legend Waste Bank Award
5.	Dadi Mulyo Waste Bank RW 03: 1st place in the Innovative Waste Bank Competition
6.	Waste Bank Dadi Mulyo RW 03: 1st place in Waste Bank Competition for Inorganic Waste Reduction
7.	Garbage Bank Kantong Rejeki RW 04: 3rd Place in Waste Bank Pembina Competition
8.	Garbage Bank Kantong Rejeki RW 04: 2nd Place in Waste Recycling Lantern Competition
9.	RW 10 Region: 2nd Runner-up in the Proklim Village Competition
10.	Tri Yulianto and Fitriyani (Faskel Bank Sampah): 2nd Runner-up LCC Faskel Bank Sampah
11.	Koespilah: Champion of the Kemantren Facilitator Video Competition
12.	Andityo Bagus Baskoro, ST., M.Eng.: Village Head of Environmental Mobilization in 2023

Source: Cokrodiningratan Village Website

This reveals that there is direct communication such as socialization, training, and regular meetings conducted by the waste bank forum as well as a structured WhatsApp group in managing internal communication management as a channel to build community awareness.

4. Internal and external Communication Management

Internal and external communication is essential for every organization to create awareness, understanding, and maintain beneficial relationships with the community, as well as support the achievement of the organization's vision and mission (Gandariani, 2023). In Kelurahan Cokrodiningratan, this communication is used to increase community awareness in waste management. Based on an interview with Mrs Siti Fatimah, the form of internal communication is done through Instant Message, especially WhatsApp, which allows for quick exchange of messages and files between users. (Zuliarso & Februariyanti, 2013). WhatsApp is a popular IM platform in Indonesia (Muhammad Awin Alaby, 2020). and is also used by 88% of Singaporeans (Newman et al., 2021; Wei et al., 2023). This makes it an effective and wide-reaching communication tool. Cokrodiningratan Village utilises

WhatsApp as an interpersonal communication channel to convey information related to waste management. Although interpersonal communication is traditionally conducted face-to-face, it is not as effective as face-to-face communication (Anggraini Citra, 2022). Pierre Levy's new media theory states that communication can also be done virtually through digital platforms that are interactive and without space and time constraints (Erlinawati & Sinduwiatmo, 2024). The presence of this new media has changed the way humans interact and contributed greatly to interpersonal relationships (Fauzi, 2017). In Cokrodiningratan, the dissemination of information through WhatsApp is structured: starting from the Kelurahan Waste Bank Forum group, passing on to the RW Waste Bank group, then to the RT group, ensuring that the message reaches all levels of society.

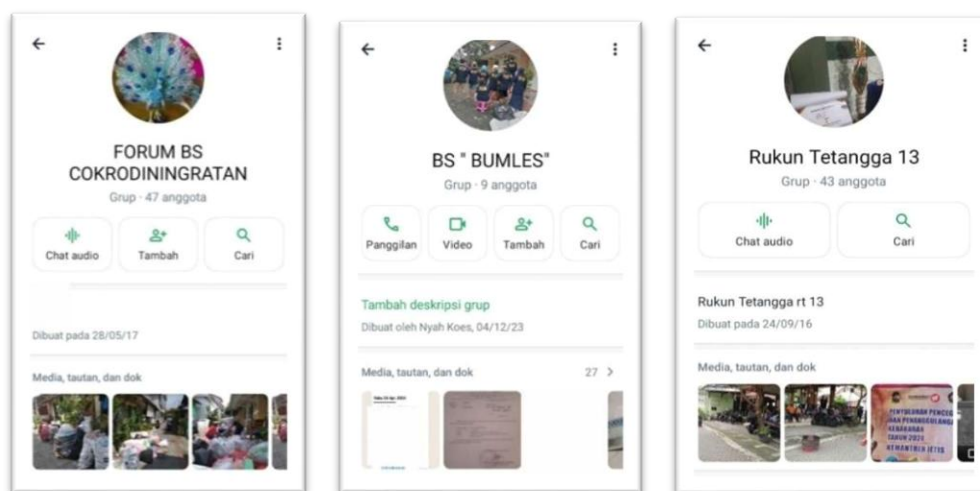


Figure 9. The flow of distributing information on the waste management movement in Cokrodiningratan Village through WhatsApp groups

Source: Personal documents (24/04/2024)

Siti Fatimah as the secretary of the waste bank forum stated that the distribution of information is easier and faster because the Cokrodiningratan Village Waste Bank Forum includes the core of the waste bank in each RW and the waste bank in each RW, covering all RTs in the RW. "Our communication is easy because there is a WhatsApp group, especially the Waste Bank Forum in this village, including the core in the waste bank of each RW" (Interview, April 24, 2024). This is based on the dissemination of information through the WhatsApp group in a structured manner and facilitates access to the distribution of existing information. The same thing was also said by Siti Masamah as a resident stating that distributing information through WhatsApp is easier and faster. "For information about waste management, this is easily accessible, because there are WhatsApp groups in each RW waste bank and RT WhatsApp group" (Interview, April 20, 2024).

This reveals that WhatsApp is an internal communication used in communication strategies to build public awareness regarding the importance of proper waste management. WhatsApp can build a culture of the tech-savvy generation and its use as individual or group communication is also more suitable, this is also a way to maintain relationships with others and as a means of

communication as an information source (Fauzi, 2017). External communication is communication carried out by organizational leaders to the public outside/external the organization (Gandariani, 2023). Based on a statement from Siti Fatimah revealed that there is cooperation from DLH Yogyakarta City related to coaching and mentoring. Due to research limitations, and internal data management is not good enough, researchers cannot reveal clear data related to external cooperation carried out by Cokrodiningratan Village in terms of waste management.

The research shows that waste management in Cokrodiningratan Urban Village, Yogyakarta, is quite effective thanks to the implementation of communication management which includes planning, information distribution, performance reporting, and internal communication management such as direct socialisation and the use of WhatsApp, which has proven effective in increasing residents' awareness. However, this study still has limitations in terms of external communication and internal data management. The low awareness of the people of Yogyakarta towards independent waste management is a major challenge. If all villages implement a communication strategy like Cokrodiningratan's, household waste management can be a major solution. Support between residents, village officials, and the waste bank forum is crucial in establishing effective communication management, while the age segment also needs to be considered, as generation X and baby boomers are more effective with face-to-face communication than social media.

5. Application of communication infrastructure in enhancing citizen participation

Communication Infrastructure Theory (CIT), developed by Sandra Ball-Rokeach and Yong-Chan Kim, is a theoretical framework that explains how local communication infrastructures-including media, community organizations, and citizens-play a role in strengthening social cohesion, civic engagement, and public health in communities. (Yong-Chan Kim & Sandra J. Ball-Rokeach, 2006).. The results show that Communication Infrastructure Theory (CIT) is relevant in understanding the communication dynamics of residents in Cokrodiningratan Village in the context of waste management. CIT emphasizes the importance of local storytelling networks, namely interactions and narratives built among residents, community organizations, and local media to shape social engagement. In this context, direct communication channels such as community meetings and WhatsApp groups have proven more effective than social media such as Instagram or the official village website. The interpersonal communication approach taken by community leaders such as the waste bank forum manager, RT head, and Cokrodiningratan Urban Village Head actively formed a collective narrative that encouraged residents to be aware and involved in waste management.

Siti Masamah, explained that effective communication occurs during community meetings and during training related to waste management. "When there is a meeting to discuss waste management, we tell stories, oh, this is waste that

is separated and this is waste that can be used as compost," (Interview, April 20, 2024). These simple stories become shared experiences that spread to other neighbors and form an understanding without the need for formal instructions. He also admitted that he prefers to convey information through direct chat or WhatsApp, which is usually to inform about the schedule of the waste bank or other meeting schedules.

Similarly, Siti Fatimah said that changes in people's attitudes towards waste are mostly influenced by stories from fellow residents who have tried certain practices. She gave an example, "When I told them about how to make compost from kitchen scraps, the women became interested in trying it too. That's how many people started to participate" (Interview, April 24, 2024). Not only that, when there is a waste bank, residents also tell stories about the income when exchanging waste for money and from there residents also pay more attention to their surroundings and start sorting waste properly, because waste can also be a field of sustenance. This kind of personal story creates emotional closeness and higher credibility than messages from social media that tend to be one-way. This supports the CIT concept that storytelling between citizens is the most powerful form of communication in building community participation.

D. CONCLUSIONS

The research found that Cokrodiningratan Village is quite structured in managing waste. Based on the application of communication management in Cokrodiningratan Village. By doing some communication planning that focuses on communication strategies through appropriate communication channels. Cokrodiningratan Village distributes information through direct communication, social media, WhatsApp, and banners/ posters. The distribution of information that has been planned, direct communication is a communication strategy that is quite effective in building public awareness in managing waste properly. The existence of structured WhatsApp group short messages is also effective in disseminating information easily and managing internal relationships in Cokrodiningratan Village, so as to build residents' enthusiasm and increase awareness of proper waste management. This is also supported by interpersonal communication that occurs directly or indirectly. But on the other hand, there are dynamics with the low access of citizens in using Instagram pages and social media accounts.

This shows that Instagram and the website are not effective in disseminating waste management information in Cokrodiningratan urban village, Yogyakarta city. This is because the waste management actors are dominated by generation X and generation Baby Boomers, so these groups do not have *engagement* with the website, and especially Instagram social media. Because for generation X and generation Baby Boomers, Instagram as a visual platform that emphasizes public content sharing and self-image building, so it is less relevant to the needs of waste management information that is more practical and operational in nature and although pages can be a comprehensive source of information, it often requires active initiative from

users to search and access information. This is an obstacle for Generation X and Baby Boomers, who are not accustomed to or do not have the free time and *browsing* more freely, to explore websites regularly (Social et al., 2019). However, WhatsApp is designed as an instant messaging application that is relatively easy to use, even for those who are not familiar with technology (Al Zuhri, 2022).

This generation gap makes differences in the use of social media that are not always familiar to baby boomers and millennials (X). The success of communication in waste management in Cokrodiningratan village is also supported by Communication Infrastructure Theory (CIT) which emphasizes the importance of local *storytelling* networks. Residents, community leaders, and community organizations actively shape shared narratives through direct conversations and instant messaging media that strengthen social engagement. Personal stories, such as experiences of composting or earning income from waste, create emotional closeness and high credibility, which encourage other residents to get involved. Thus, interpersonal communication and narratives between residents are the main forces in building participation and collective awareness in waste management in Cokrodiningratan Village.

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