

Participation and Role of the Digital Media in the Sigay Waterfall and Kampong Development

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ABSTRACT

Through the Bandung City Public Works office, Bandung City Government has taken the initiative to revitalize the Sigay Waterfall in the Cibeureum river as part of water system revitalization. Sigay Waterfall and the surrounding Kampong are located at Isola Sub-district, next to West Bandung Regency. As revealed in the workshop, the complex characteristics of the Sigay lead to an agreement among stakeholders for an experiment of the revitalization approach by integrating the physical-social-economic development as one of the urban tourism destinations. This paper aimed to compare WhatsApp's online communication with adult residents and offline contact with the children during workshops, dance rehearsal, and planting activity. WhatsApp communication analysis showed its effectivity on incorporating actors, raising sensitive issues, and guiding the process to its objectives and the agreed frame time. The WhatsApp dynamics were analyzed to get the pattern, subject, and structure of relation corresponding to the development process for 2.5 months. The offline activities were discussed qualitatively related to the spatial reclaim through children's activities. The Pilar Tunas Nusa Lestari Foundation at the Sigay development process acted as the stimulator, facilitator, and initiator using the three layers' prism model to map the characteristics of Sigay. The participatory action theory was used to comprehend the effectiveness of 2.5 months of facilitation. Effectiveness and impact analysis of communication were carried out, paying attention to each stage and linking the micro-level, city, and Bandung Basin findings. The paper concluded by differentiating online and offline communication across layers and actors to the realization of objectives that led to the changes in the environment and community. This experiment also showed any technology could not substitute the importance of actors' vision contributing to the changes.

Keywords: *Sigay Waterfall and Kampong, Participation, Digital Media, Development Process.*

1. INTRODUCTION

Stakeholder participation in development is mostly hindered by the gap of information that leads to distrust, conflict, non-cooperative attitude, delayed processes, and output gap – the outcome of the objectives. Its fixtures, mobile phones, and communication platforms, such as WhatsApp, YouTube, and Facebook, have become standard elements of personal and communal communication methods. Theorists have suggested ICTs transform communications. Thus, society and communities, since the www in the 1990s, as the earliest is Manuel Castells, who worked on the network society, considered the web to be a technology assisting the geographic distance and scale through the

immediacy of modern communications and our previous assumptions around space-time dissolved (Amin, 2000; Castells, 2000) [1]. Social connections and communication previously were only possible at a local level, and direct communication, by affordable and assessable technology, could now instantly connect and lessen the distances. For highly connected people, identities, such as gender, place, nationality, ethnicity, and socio-economic status, are dissolved, offering new possibilities for social interaction and developing transnational social capital [1]. Thus, these new online spaces are seen as opportunities for communities' discourse and civic activity that writers, such as Putnam, had identified as having declined markedly in the post-war era

(Putnam, 2000; Field, 2008) [1]. The growth of social media over the last decade, through blogs and sites, such as Facebook, YouTube, and Twitter, to name but a few, are continuing this focus on the ability of ICTs to develop social capital [1]. On the political side of communication, digital information has proven to increase political engagement, raise knowledge & misinformation of the subject, and show differentiation of media literacy and other media platforms [2].

This paper developed as an analytical review of the Pilar Tunas Nusa Lestari Foundation (from now on abbreviated as TNF; Tunas Nusa Foundation) between December 2019 – March 2020 to the community Sigay and the city hall of Bandung. The facilitation itself has been designed as a follow-up action¹ based on the eight cities research finding by Tunas Nusa Foundation for the City of Bandung. 2019 was the year of initiating the urban network as partners of the peri-urban initiatives, e.g., The Urban Hub 4 Changes platform, collaboration with city hall offices, and initiatives at the micro-level sub-districts, and others, two of which are the Sigay waterfall and kampong.

The kampong surrounding Sigay waterfall consists of 65 households in hamlet 9, Isola Sub-district, Sukasari District, Bandung City. It could be said that the community of Sigay is a representative of a peri-urban community in the north part of Bandung. Located between the Indonesia University of Education and Daarut Tauhid², the kampong has been growing unplanned with limited accessibility³ and inadequate access to clean water and other infrastructure facilities. Most of the houses are constructed in the riparian area of the Cibeureum river using various available materials, and not all of them are supported by the legal land title. All of the households are connected directly to the spring surrounding the waterfall. Some of the kampong male members work outside of the city and come home on weekends and holidays. The children go to the primary school of Gegerkalong Girang and the

29 Junior High School of Bandung, which are nearby.

In the north of Bandung city, Sigay, in the river of Cibeureum, separates the area of Bandung city from West Bandung's regency. The houses extend along the street to alleys and the steps to the waterfall. The further we walk along the road, the worse the houses' conditions are. Some are even built on the precipice of the Cibeureum river without proper necessary infrastructures.

This revitalization applies the Participatory Action Research (PAR) to analyze the Sigay revitalization process as an alternative approach to traditional social or scientific research. It moves social inquiry from a linear cause and effect perspective to a participatory framework that considers the contexts of people's lives (Chandler & Torbet, 2003; Kelly, 2005; Young, 2006) [3]. Moreover, PAR involves a cyclic process of research, reflection, and action (Marshall & Rossman, 2006; Selener, 1997) that "offers a critique of, and challenge to, dominant positivist social science research as the only legitimate and valid source of knowledge" (Maguire, 1987, p. 10) [3].

2. THEORY AND REALITY

The kampong's growth and socio-economic activities surrounding the area have been triggered by its location near the Indonesia University of Education and the Daarut Tauhid mosque & boarding school. Some natives who own properties are mostly left to better areas, and migrants from Bandung surrounding regency settle in the kampong to seek new opportunities. Food street vendors, online drivers, cleaning service, shop keepers, and factory laborers are some occupations in the Sigay community. During the first observation, we found much collaboration in the community; one of the best is an annual event named 'Hajat Lembur' to offer welfare. In terms of social cohesion, we also found many conflicts on property, power, and authorities.

¹ The finding in 2013 suggests that Bandung City and others settlement at Bandung Basin has been facing the high risk of water and food security, since then the foundation starts several actions to mitigate the finding, e.g., creating a network integration for peri-urban revitalization concept, developing the living laboratory in Rancaekek Wetan, developing the co-living experiment, facilitating the community of peri-urban, bridging

peri-urban community with academic society and others.

² A religious based education institution well known in Indonesia

³ Access to the kampong limited to walking with steep steps and motorcycling

2.1 Issues, Challenges, and Opportunities for Sigay Development

As illustrated in figure 1, the ecosystem of the Sigay waterfall and kampong could be divided into three areas, namely:

The physical ecosystem of the Sigay waterfall is part of the Cibeureum river and the water system of the Bandung Basin. Some of the issues are waste pollution, landslides, drought, and flood in the monsoon season. As another part of the water system, Bandung Basin faces the impact of land-use conversion (especially the conservation area in the upper hill), inadequate waste management, high level of groundwater utilization, and the dynamic of climate change at the macro level.

The socio-cultural ecosystem of the Sigay is part of the society of Isola's sub-district and the dynamic of Bandung society. The specific characters come from the origin of its people, settling down in the areas, and the present occupation. Like other peri-urban residential in Bandung, the intense higher-education activities in Bandung city contribute to broad access to the fast-growing information technology that stimulates the spread of information, knowledge, and alliances.

The economy-power ecosystem of the Sigay is based on a location in the north of the city that initially looks better compared to the city's southern part. The site also leads to becoming part of the Bandung City economy as part of the international tourism market. For the migrants, the location demands high daily costs, even in Bandung.



Figure 1. Issues, Challenges, and Opportunities for Sigay Development

2.2 Understanding the Sigay

The analysis above is derived from the three layers' prism theoretical framework (Figure 2) that defines the city (or other settlement entities) from three-layer perspectives: Micro, Mezzo (the town),

and Macro level, and three key points: Economy-power; socio-cultural, and physic-environment [4]. The model [4]clarifies the dynamics, challenges, and opportunities of each as well as the relations.

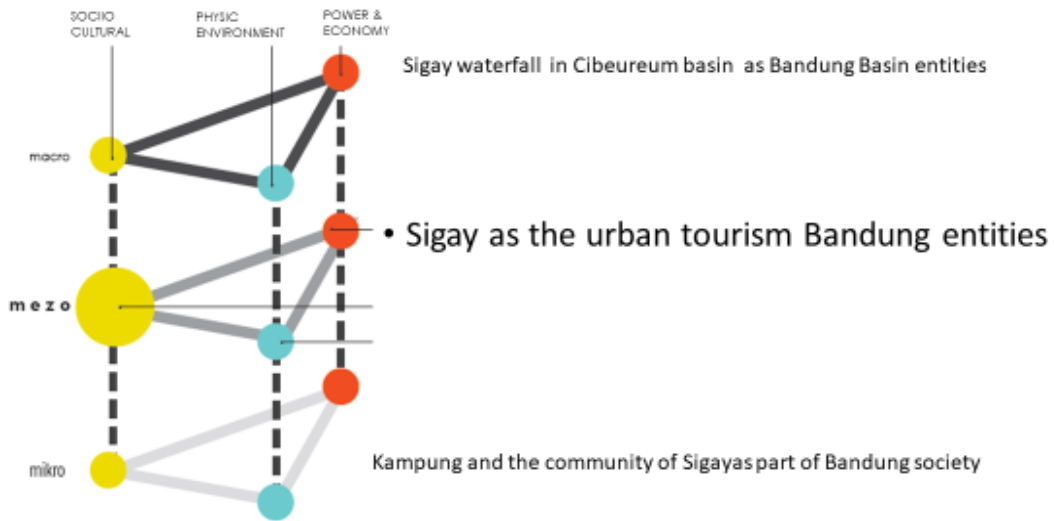


Figure 2. The Framework of Sigay Observation

2.3 The players and characteristics of communication of Sigay development

Tunas Nusa Foundation (TNF) is an NGO based on voluntary based affiliation. The members are mostly young professionals in their early career or between jobs/education and life stages. Some of them reside in Bandung, several in other cities in Indonesia, and abroad. The facilitation activities are derivatives of its eight Indonesia⁴ cities research, with the preliminary findings for Bandung are high food and water risk. The Sigay facilitation originally was part of improving the city's water security, then developed into integrated facilitation. The nature of the organization and the situation of Sigay require a particular way to communicate; thus, the process could be done inclusively. Theorists acknowledge the natural progression of organizational models and communications methods as part of governance [5]. WhatsApp group has been the latest mode of group communication; it is simple, affordable, and accommodative as it can send pictures, files, voices, and functions for video calls. Email, direct messages, meetings, workshops, and fieldwork are other communication modes in Tunas Nusa.

Based on the above understanding of Sigay's structure and TNF's internal capacity, it was decided that the facilitation will be held for 2.5 months, starting from December 2019 – March 2020. The combination of field assessment and discussion with the public works office as well as the planning board office led to a proposition developed during the strategic planning workshop:

The Sigay revitalization approach would integrate the waterfall's physical revitalization, the river and the kampongs, and community consolidation.

As a unique physical asset, the waterfall could be combined with the cultural assets as an embryo to an urban tourism destination.

The revitalization could be started with an information forum with all the residents. Four residents were appointed to represent the women, men, girls, and boys to collaborate with other institutions.

To give experience reference on the goals, ten residents presented the Saung Udjo shows and discussed the possibilities of creating Sigay as a tourist destination.

⁴ The cities are Medan, Jatinegara, Bandung, Surakarta, Yogyakarta, Surabaya, Manado, and Balikpapan.

Table 1. The actors involved in the process were divided into four big groups as bellow:

	Direct actors	In-direct actors
Formal organization	Subdistrict of Isola, The Bojonegara PW Office, Schools, and The Citarum Harum.	The Public Work Office, The Planning Board Office, The Sukasari District Office, IUE, and Daarut Tauhid.
Informal organization	Households, the person in charge of mosque, the martial "silat" art organization, neighborhood, hamlet, and the farmer.	Pilar Tunas Nusa Lestari foundation

The actors' involvement (Table 1) in the revitalization process was then categorized into two groups based on the mode of communication, the

online (in group and personal) and direct communication as support to field activities.

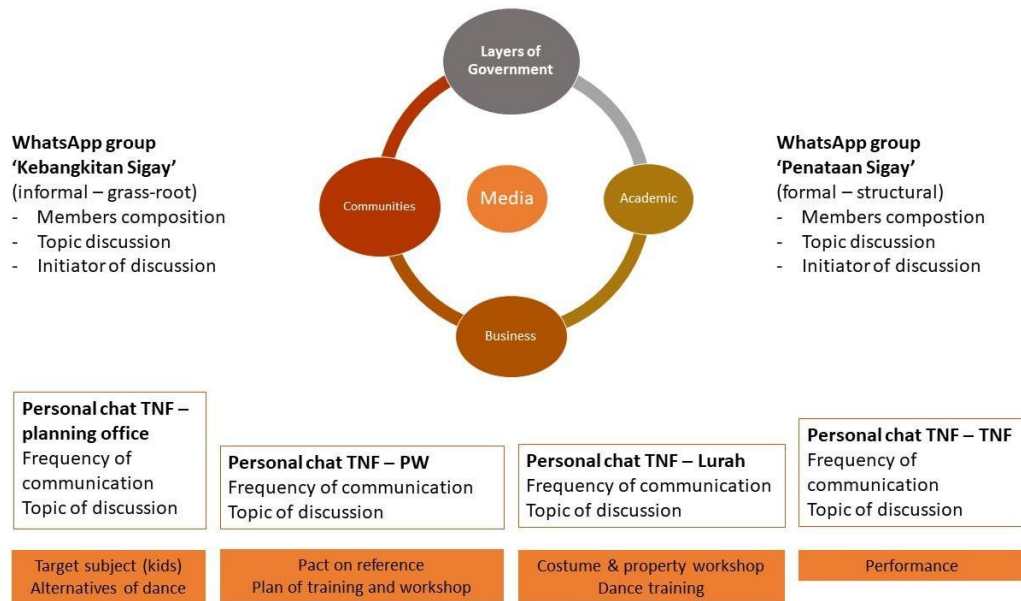


Figure 3. The players and characteristics of communication of Sigay development

The above diagram shows the analysis frameworks on Sigay revitalization communications; the white boxes above represent online communication while the brown boxes represent offline communication. The following are players who had a role in the development of Sigay:

Government: The most technical officers came from the city hall, the public works, the planning board, the settlement, housing, parks, and property of the Sukasari District and Isola Sub-district. The

Citarum Harum organization could also be categorized as a government body that has been involved in improving the water basin of Citarum. Two potential schools were involved in the processes, but only one teacher, an activist in the Sub-district youth organization, attended the strategic planning workshop.

Academic: A person from the Indonesia University of Education (as a representative of the academics) attended the formal processes three

times, was involved in the WhatsApp group discussion, developed a contribution plan.

Business: A single business entity contributed to the 2nd Sigay Purnama by coordinating with Isola's sub-district. Around the kampong of Sigay, there were many micro-enterprises run by household. However, there was no opportunity for one small shop that served the catering service for the 1st Sigay Purnama event in collaboration with the neighborhood members during the processes.

Communities: It could be said that the Tunas Nusa Foundation was a representative of the community at the city level who collaborated with other actors to facilitate the Sigay developments. On the other hand, TNF was an academic organization because conducting research has been its primary objective. On a note, it is essential to determine Sigay's facilitation in TNF programs, activities, and the means of communication in the form of internal discussions.

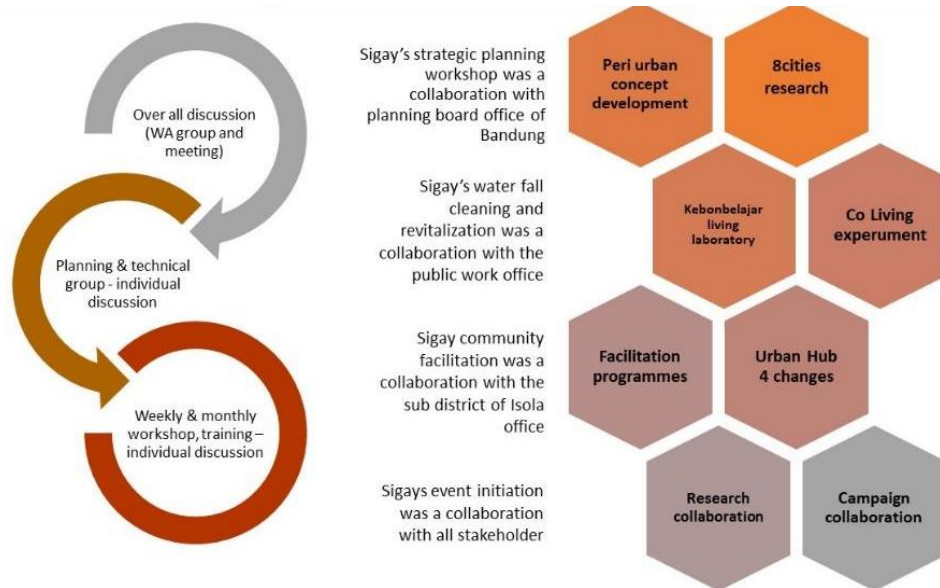


Figure 4. Sigay facilitation on Tunas Nusa Program – Activities & Communications

The position of Sigay facilitation in the research framework of TNF are; the theory is the three layers' prism, the methods are inclusive and experimentation, the communication platform is social media, including WhatsApp, FB, Instagram, and the Tunasnusa.org. The eight cities research derivative is a series of concepts on urban issues, experimentations, collaborations, and facilitations. As shown on the right side of figure 4 above, the center and the left side of the diagram illustrate how the framework is executed in Sigay 2.5 months' facilitation.

The center of the diagram is the stages of Sigay revitalization activities. Setting up a shared understanding of Sigay condition with all stakeholders on the strategic planning workshops with the outputs are; physical-social-economy issues of Sigay waterfall and its surrounding kampong plus

the agreement on the objectives, stages, role sharing, and production. The physical activities on Sigay waterfall and the river cleaning and improvement are part of the collaboration with the Bandung City Public Works Office on urban water system improvement. The social facilitation to support the community activities and event initiations are part of the cooperation with the Sub-district of Isola Office.

The left side of the diagram is the communication methods, including online and offline communications. The main subjects are water security and environmental condition, technical and planning discussions on improving the condition of Sigay, and solving practical issues and division of responsibilities. The communication method used WhatsApp groups, meetings in groups, personal chats, and individual meetings or joint works.

2.4 Internal Communication of Tunas Nusa Foundation

From the theoretical point of view, the TNF activities at Sigay could be categorized as an experiment following a concept derived from research findings. A study of eight cities in Bandung proved the most critical risks faced by Bandung and other settlements in Bandung are water and food security. The collaboration with the city hall of Bandung, especially the Public Works of Bandung, opened an opportunity to extend the contribution by

involving community participation at the grass-root level.

The vision's realization required a framework and a comprehension of communication to ensure an efficient and effective mission delivery. This paper was a post-analysis of the experience. Scientifically could be a new insight for the researcher in TNF and others on the importance of understanding the power of communication (Figure 5) in facilitating process and changes as the outcomes.

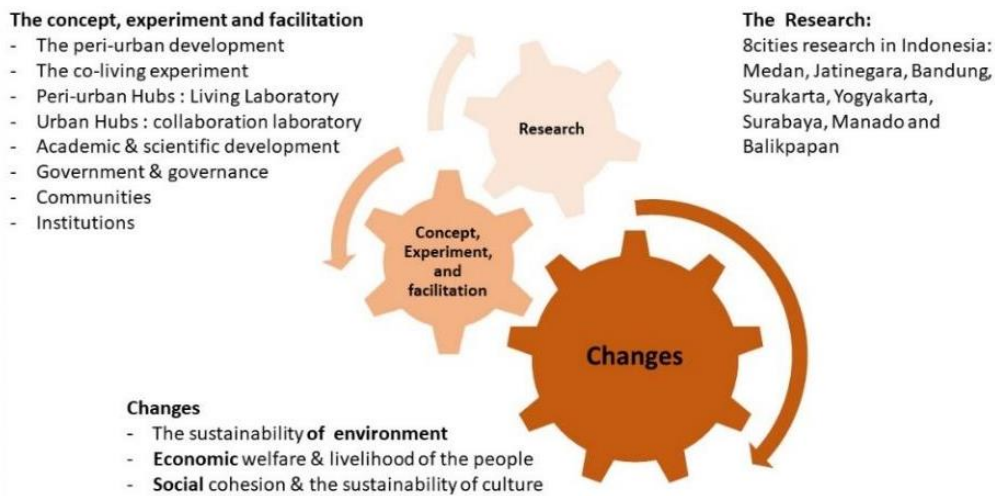


Figure 5. Internal Communication of Tunas Nusa Foundation

3. METHODOLOGY

This research was participatory action research (PAR), but the analysis applied quantitative and qualitative method analysis. Participatory action research (PAR) is considered a subset of action research, which is the "systematic collection and analysis of data to take action and make a change" by generating practical knowledge (Gillis & Jackson, 2002, p.264). According to Stringer (1999), the traditional social sciences are challenged by action research, which seeks full collaboration by all participants who often engage in socio-political changes. By maintaining a commitment to local contexts rather than the quest for truth, PAR liberates research from conventional prescriptive methods and seeks to decentralize traditional research (Marshall & Rossman, 2006) [3].

The quantitative method analysis, to be precise, the method of descriptive statistical analysis was

used for describing the contribution of a group to the Sigay development. Contributions were analyzed by counting the number of messages, documents, and images sent by the users. While a qualitative study was used to (1) explore the content of messages from online communication and process that happened at offline communication, (2) find out what issues happened, and (3) what actions had been taken to solve the problems to produce findings that hopefully useful for our next research.

The data used in this research were primary and secondary. The preliminary data were the conversation on WhatsApp, field observation, while the secondary data used were the geographical Sigay data taken from various sources. Retrieval of conversation data in WhatsApp was done by exporting the conversation as WhatsApp has a feature to export conversations into a document with the format (.txt). Then the manuscript was reprocessed in Ms. Excel to calculate the

contribution of each user. The messages were sorted to find out the dominance of content discussed in a group or personal chat. Below is a list of WhatsApp data used:

1. Group Chat 'Penataan Curug Sigay'
2. Group Chat 'Kebangkitan Sigay'
3. Personal Chat TNF (represented by RS) with Government officials from Public Works Bandung City (represented by KPT)
4. Personal Chat TNF (RS) with the resident of Isola sub-district (UC)
5. Personal Chat TNF (RS) with a head of Isola sub-district (IRV)
6. Personal Chat TNF (RS) with TNF (NPK)

The research variable was the contribution from each actor in WhatsApp chat, structure, and communication effectiveness.

4. SIGAY COMMUNICATION ANALYSIS

The growth of the internet and social media use provided new opportunities for communicating with and understanding local communities and people. The increased use of mobile and location-based social media services provided a large social data source that contained data on people's behavior, mobility, and feelings about the areas [6].

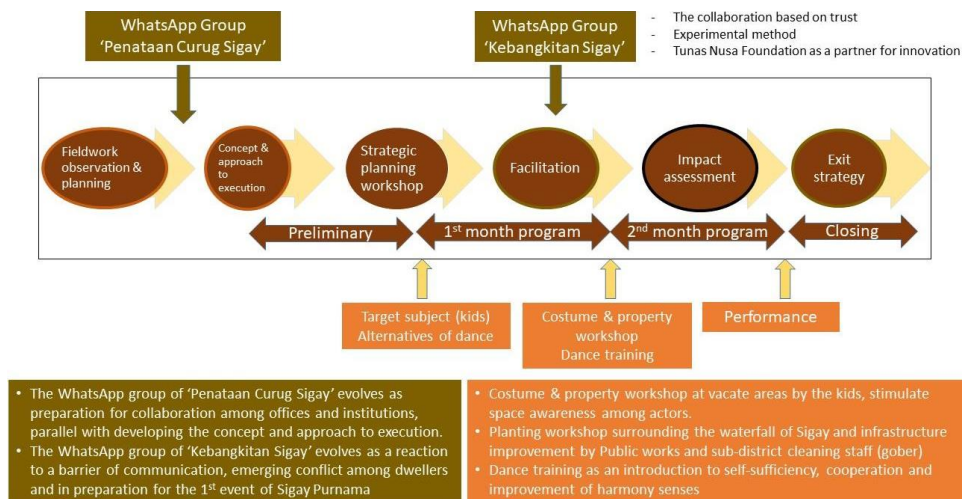


Figure 6. The facilitation process, WhatsApp group chat, and offline activities

Figure 6 illustrates two parts of communication and coordination and the strategic planning workshops as the separators: before the workshop and communication occurred among actors at the city level with the head of the neighborhood representing the resident's importance. The discussion topics consisted of mapping the situation, issues, approaches, dates, physical rehabilitations, programs, and events. In the second part, both WhatsApp groups are activated for different subjects and purposes. The 'Kebangkitan Sigay' WhatsApp Group focuses on the technical discussion for the two events: the 1st Sigay Purnama and 2nd Sigay Purnama.

This paper's digital communication analysis consists of two parts: communication in two core groups and communication in personal chats. The chats were analyzed to see users' contributions in their online communication. Also, offline communication was described because there were differences between online and offline communication. Group members could not express themselves subtly online; their language use was more explicit than offline [6]. The qualitative analysis of the offline activities was done by observing the facilitators comparing the weekly activities and the children or adult reaction.

4.1 Online Communication Analysis

4.1.1 The 'Penataan Curug Sigay' WhatsApp Group.

There were 1654 messages/documents in the group from November 21, 2019 - March 10, 2020. This group was created for planning the Sigay to make the coordination easier and faster. There were several members from the city hall, namely: The Planning Board officers, the Public Works officers, a settlement, housing, park, and property officers;

the public workers of West Bandung regency, the Citarum Harum organization, the district of Sukasari residents, and the sub-district of Isola residents. The government actors in the group contribute 49% of the messages/documents. The second-largest contributor group is TNF, which consisted of six persons, share 38% contribution with one of them, RS, sent 592 messages/documents, or 35.79%. Others, coming from university contributors, professionals, residents, and associations, sent messages/documents for less than 5%. The chart below shows the structure of the contribution of each actor in the WhatsApp group.

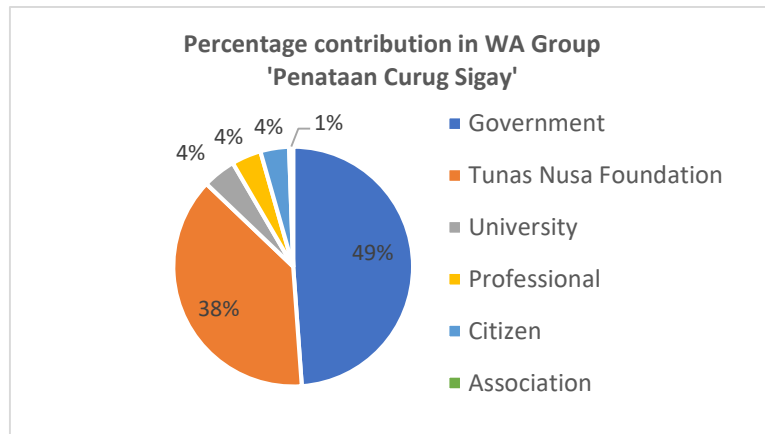


Figure 7. Contribution chart of WhatsApp group 'Penataan Curug Sigay'.

The diagram above illustrates the near balance of communication between the government and the non-government actors. However, it is supposed to use the ABCG-M actor composition, as shown in figure 3. In figure 7, the missing actor is the media, and the communication activation is dominated by the government and TNF representing the community.

The contribution percentage may be affected by the number of members from each contributor group. As we could see, the most considerable contribution is shared by government actors consisting of 35 persons, TNF with six persons, academics from various universities with five persons, and two professionals, while two persons represent the resident. The smallest contribution comes from the association that is only represented by one person.

4.1.2 The 'Kebangkitan Curug Sigay' WhatsApp Group.

There were 537 messages/documents in the groups from January 7, 2020 - March 10, 2020. The most active member in the group chat was RS, who sent 252 messages/documents or 46.93% of the total message/documents. It is concluded that RS played the leading role in the group chat because she had to coordinate the Sigay Purnama event activities and activate the group chat to work together for the event. The chat contents were about children's participation in dance rehearsal and property makings, schedule, run-down event, and division of responsibility. Other TNF members were quite active by giving responses to issues and clarification in the group, except NPK.

IRV, the head of Isola Sub-district, only gave a 3% contribution. There is a strong indication that he only responded to the most crucial message/document according to the event from the chat's content. The Isola resident was pretty active in responding to the group chat (27% contribution), but

an enormous contribution was only from six persons out of 19. The active members are ARB, DC, MN, ND, RFD, and UC. The most active one was ND, who sent 30 messages/documents to the group. The percentage of contribution can be shown from Figure 8.

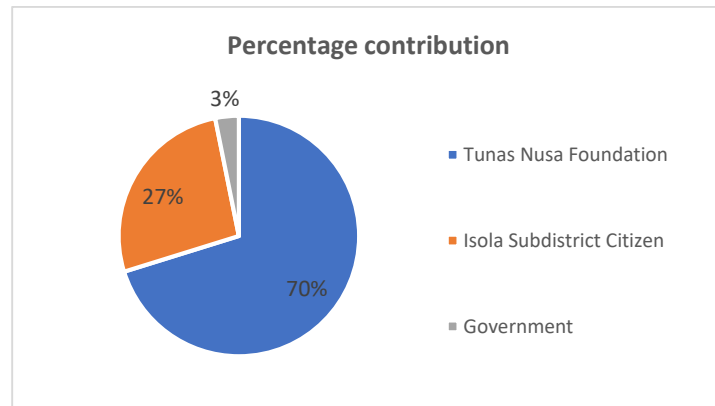


Figure 8. Contribution chart of WhatsApp group ‘Kebangkitan Curug Sigay’

4.1.3 Personal chat Tunas Nusa Foundation (TNF) with Government officials from Public Works Service - UPT Bojonagara, Bandung City.

To run the physical action on Sigay waterfall, clean the Cibeureum river, and plant greenery in the riverbank and surrounding the kampong, RS, as the TNF representative, had to coordinate with KPT, the Public Worker of Bandung City, Bojonegara division. This personal chat started on January 1, 2020 - February 11, 2020. RS sent 303 messages/documents from a total of 534 messages/documents (56.74%), meanwhile KPT sent 231 or 43.26% of messages/documents. The near balance composition of communication is interesting because, from the social position, the structure should be RS as a senior patron dominating KPT, the junior – inferior client. This finding suggests an open–strong relation between the two.

The communication subjects were: the construction of the fence in the small Sigay waterfall, progress in the field, the technical coordination for the cleaning program, and the Sigay Purnama 1 & 2 event execution.

4.1.4 Personal chat Tunas Nusa Foundation (TNF) with the resident from Isola Sub-district.

There were 155 messages/documents in this personal chat between TNF and residents. TNF was represented by RS, while UC represented Isola. RS and UC started the communication from January 24, 2020 (after the 1st Sigay Purnama event ended) until February 11, 2020. The messages/documents shared in this WhatsApp personal chat showed many questions from UC to RS. However, RS also often stated a clarification due to the conflict in Sigay so that UC could deliver the statements to other residents, especially the parents in Sigay. UC sent 69 messages/documents to the chat (44.51% of total messages/documents), and RS sent 86 messages/documents (55.49%). In brief, RS and UC talked about the social-economic condition in parts of the Sigay development.

This pattern of communication illustrates the facilitation from RS to UC to become the influencer among residents. Unfortunately, based on the timeline, it is clear that RS talked late to UC after the 1st Sigay Purnama event.

4.1.5 Personal chat Tunas Nusa Foundation (TNF) with a Head of Isola Sub-district.

Head of Isola Sub-district, IRV, had an intense discussion with TNF (RS) due to many Sigay's development problems. IRV bridged RS with residents in Isola Sub-district and gave information about the real conditions in the field. At the same time, RS coordinated with IRV to facilitate the event and provide movement ideas for better Sigay development. There are 521 messages/documents, consisting of 232 messages/documents from IRV (44.52% from total messages/docs) and 289 others from RS (55.48%). The personal chat started on December 20, 2019 – February 19, 2020. RS and IRV often discussed the physical, social, and economic problems in Sigay development.

According to the dates, it is clear that IRV was the leading partner of the facilitation of Sigay by looking deeper into its subject of discussion. IRV could give an insight into the broad spectrum of the development issues at the grass-root level, the physical, social, and economic matters interwoven on the micro-level, mezzo, and macro levels.

4.1.6 Personal chat Tunas Nusa Foundation (TNF) with TNF.

To make the facilitation program goes well, RS, as head of TNF, should intensely communicate with TNF volunteers. In this case, we analyzed personal chat between RS and volunteers of TNF (represented by NPK). NPK was involved at the workshop 'Penataan Curug Sigay' in November 2019 until the facilitation ended. With RS, NPK discussed the planning of Sigay, gave some ideas, and helped coordinate weekly children's dance rehearsal when RS was absent. It also helped provide the property's needs for the event and the appreciation of gifts at the end of the event. In this personal chat, RS and NPK started to talk about Sigay development from September 29, 2019, to prepare the workshop 'Penataan Curug Sigay.' The discussion about Sigay lasted until February 29, 2020. RS always updated the Sigay condition to NPK, gave some perspective to respond to NPK's ideas, discussed and shared the job description for the 1st and 2nd Sigay Purnama events. However, RS mostly coordinated the event from the workshop Penataan Curug Sigay until the 2nd Sigay Purnama. RS and NPK chatted about Sigay and ended with a discussion on the

appreciation gifts preparation for the children of Sigay. There were 2459 messages/documents from September 29, 2019 – February 29, 2020. However, the discussion was not only about Sigay, as the messages also discussed other projects. NPK sent about 1296 messages/documents (52.7%), and an additional 1163 (48.3%) were sent by RS. NPK also shared more messages/documents on pictures/videos about TNF events. The internal communication structure shows a different culture since RS, as the patron, sent fewer messages than the client. Both sides gave information and clarification.

4.2 Offline Communication Analysis

In addition to online communication carried out in the Sigay development process, offline meetings were also often held to prepare for Sigay development (Figure 9). Especially to claim and create a public space in the form of a stage performance. The offline analysis started with mapping the timeline and understanding each step of the process towards the trust, collaboration, and impact on spatial improvement.

Starting in November 2019, a strategic planning workshop for the Sigay development was held with government officers, the community, academics, and Isola residents. After that, it was decided that Isola residents should visit Saung Udjo as a reference for tourist attractions to be implemented in Sigay. Saung Udjo is a performance venue, a bamboo handicraft center, and a bamboo musical instrument workshop. Also, during the workshop, a monthly "Sigay Purnama" event was set to unite residents of Sigay Waterfall. The 1st Sigay Purnama was planned for January 2020. The preparations started from December 8, 2019, to January 5, 2020, including dance rehearsal for girls and boys, costumes-making, stage repairation, and waterfall conservation.

On January 10, 2020, the 1st Sigay Purnama was held at Sigay Waterfall, and the stage had been repaired. The event went well, but the participation of parents (as adult residents) was minimal. Therefore, a WhatsApp group chat was created for parents hoping that they could participate more in improving Sigay. A cooking competition was also held for the 2nd Sigay Purnama to generate the participation more enthusiastic.

Preparations for the 2nd Sigay Purnama was preceded by an evaluation of the 1st Sigay Purnama. A greening event in Sigay was also held. The joint planting was carried out on February 7, 2020. Then,

on the same day, the stage was also prepared for the 2nd Sigay Purnama event. Finally, on February 11, 2020, the 2nd Sigay Purnama was successfully performed.

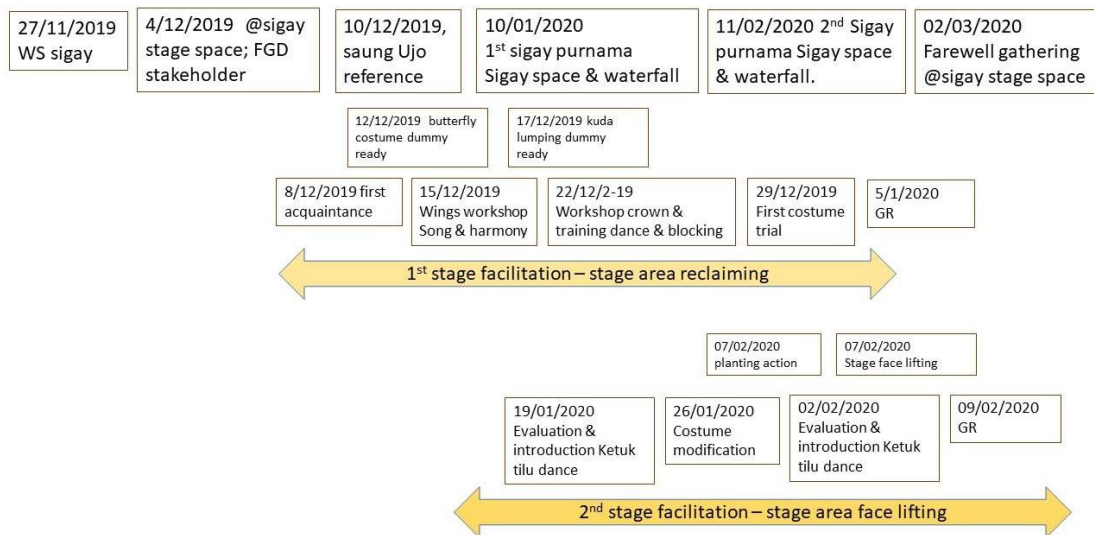


Figure 9. The Offline Event's Timeline

5. THE WAY FORWARD AND OBSTACLES

Even though the facilitation program only ran for 2.5 months, the TNF team and other institutions learned a lot from the process and result. From the perspectives of online communication by WhatsApp, we could derive the lessons as follows:

- WhatsApp group of Kebangkitan Sigay opened the barrier of communication between Tunas Nusa facilitators and the community. The initial communication flowed through the head of the sub-district and the head of the neighborhood unit. Direct communication was built since the event socialization did not work, and there was a bias that led to conflict in public spaces.
- Weekly activities were improved due to the flow of communication between the facilitators and groups. It should be noted that the WhatsApp group communication had been fully supported on the offline communication of IS and WI, the two persons from TNF. They were in charge of the dance rehearsal and event preparation.
- The subjects of discussion on WhatsApp groups were execution plans, including the reason behind the program, choices: dates, times, and agenda clarification, as well as the division of responsibilities.
- The communication using the WhatsApp group didn't stop with the parents as the group's prominent members. However, it continued to their children, including the decision on song and dance and reference exchanges between the children – mothers – facilitators. Through the WhatsApp group of Kebangkitan Sigay, the facilitators got the chance to collaborate with the farmers.
- The WhatsApp groups led to the facilitation program in preparation for the culinary competition at the 2nd Sigay Purnama event. Objectives, grouping, and choices had been discussed in detail after the earlier personal chat with several members.
- By analyzing the WhatsApp groups, facilitators understood the power contest among community members to mitigate social cohesion

development and found local champions to collaborate.

- Kebangkitan Sigay WhatsApp group, which was dominated by Isola Sub-district residents, indicated how educational background and motivation to join the activities influenced group chat contribution. The higher the academic level of the members, the more gift they shared to the group chat.
- Moreover, the Penataan Curug Sigay group chat indicated that the primary objective of engagement in the Sigay development was quite correlated with the members' contribution. TNF, who played roles as a facilitator, gave much more attention to the group than members from universities who only participated in a meaningful discussion.

In addition to online communication, offline meetings also greatly affected the Sigay development process, especially in claiming the stage and Curug as a public space. Here are the lessons that can be learned from offline meetings:

- The dance property workshop and rehearsal built relations, trust, and understanding between the children, the facilitator, and the parents.
- Weekly activities increased the title of the stage area as public space (after the 2nd Sigay Purnama, the owner reclaimed the property), and the community lost their shared room.
- The connection between the children and the facilitator growth as personal relations grew; therefore, during the farewell gathering, the children expressed more hope that the activities could continue.
- The workshop and dance rehearsal exposed the children's social and personal issues and showed that children did not have adequate access to appropriate playing spaces.
- A problematic conflict arose in the first stages of facilitation on space for a week when the workshop and rehearsal could not be conducted at the stage area.
- All utilities aiming to improve the stage quality were dislodged by one's claim to improve the prayer room (mushalla).

6. ON THE SUBJECT OF DEVELOPMENT

The vital lesson of Sigay development is the decision to use a cultural–children base for changes. The 2.5 months gave an insight into deeper issues of a peri-urban kampong like Sigay. It is not about the infrastructure gap, poverty, and marginalization, land right, but a combination of all in a complicated relationship. The children's characters represented the complex situation, but at the same time, gave a light of hope for betterment.

- When the scale of growth shifts from economic terms to human development indicators, it is the empowerment of people of the bottom level that shows the possibilities of changes. What we are afraid of is that the short facilitation will not be last long. Therefore, some efforts have been made to ensure the processes do not stop and can continue at their phase.
- To ensure continuity, trust, and participation of all community members is essential, especially for the group's marginalized members. This paper is useful for TNF to understand the WhatsApp group's capacity and take the decision to utilize the WhatsApp group as stimulators for the continuity of the changes.
- Group communications and the patron-client relationships evolved during the periods related to typical issues, importance, personal capacity and contributions, and an understanding of the bigger picture.
- The concepts of participatory and personal eagerness to participate, combined with the trust and initiatives among members, contribute to neighborhood activities' sustainability.
- Regarding the slow communication and the lack of local initiatives at the grass-root level, the 2.5 months of facilitation were inadequate to empower and ensure all the different sectors of society reached the objectives.
- WhatsApp group chat as the media will be useful if the users always stay active and contribute to the discussion, especially for Sigay development. It indicates that the role of WhatsApp as digital media depends on the users.
- During the workshop and rehearsal, offline communication demonstrated a gradual change

in personal hygiene, sharing, and caring among peers, a strong feeling as part of the group.

- The result of offline activities, costume, property, and improved ability to dance and communicate with adults strongly was related to the standard agreement of stage areas as the meeting point and center of activities, and the waterfall as the second important area.
- The comprehension of the mezzo level situation in Bandung was realized from the offline cultural activities with the children and the planting program with the adult.
- The Sigay Kampong represents Bandung's marginalized enclave settlement, the kampong sandwiched between two big education institutions, the Indonesia University of Education and the Islamic compound Daarut Tauhid (DT), did not guarantee adequate access to social improvement.
- The kampong grew because of the combination between high demand for settlement from the migrant, including students at the university, and the need for essential services from DT visitors and the neglected riparian area of Cibeureum. Mostly, the households stay in the cheap rent to access informal occupation in the surrounding area, and at Lembang, the north of Bandung.
- Based on the infrastructure gap, degradation of environmental quality, fragile social cohesion, the kampong represents the characteristics of peri-urban inside the area of the City of Bandung.

The joint effort to improve the waterfall quality by the public works team supported by the Citarum Harum and challenged by the upper stream's situation shows the Bandung basin's complicated regional system. Every time heavy rain occurs, the Cibeureum river, including the waterfall of Sigay, there is garbage and cow manure from the upper stream area. The improvement of the Cibeureum river as partitions of the City and Regency of Bandung could only be made in collaboration,

especially by the upper part, namely the Bandung Regency. The online communication and virtual data collection using IT have simplified the issues, but the management and action to solve the problem and improve the quality could not be done virtually. The trust-based understanding of the water system of the Cibeureum River cannot be reached through the three times coordination and joint field observation. The observation and analysis showed two elements of relations, the physical–environment aspect related to the Cibeureum river ecosystem and the economic concern of the kampong residence and their occupation at Lembang, the Bandung regency.

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