

The Development of Sustainable Village Design Model Using Educative Graphic Mural on Community's Environmental Responsibility Through the Application of Participatory Design Method

A Case Study: The Colorful Village of Kampung Cumpat Kenjeran Surabaya

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ABSTRACT

The growing trend of colorful villages (kampung) in Indonesia in recent years has triggered the multiplication of this type of style or design. This model was firstly initiated at Code Village, Yogyakarta. Other similar application started to emerge in the past years, such as at Jodipan Colorful Village in Malang and the Kenjeran Colorful Village in Surabaya. Most of the village models were developed by either the government or other stakeholders to improve the social standard of the community. That is through re-arrangement and re-decoration with colorful painting, of villages that previously known as slum areas. However, the new appearance does not always parallel with lifestyle or habitual improvement from the community. This case study would look closer on how the model application could contribute to more environmentally sound community, as exemplified at Kenjeran colorful village. In fact, there is an opportunity to utilize colorful blocks in painted houses as educative media, in the form of graphic mural. One of which is to educate citizens about environmental responsibility and improving the quality of a healthier lifestyle. The model of sustainable village development through educative graphic mural media can contribute to the scientific field of visual communication design, particularly on how to design illustration and visualize message that voices environmental responsibility, such as: sorting and processing waste, body hygiene, greening the village and even rekindling the local identity. This research activity also used participatory design method by directly involving the design user or in this case, the community, at the planning and graphic mural production process.

Keywords: *sustainable colorful village model, kampung cumpat kenjeran, graphic mural, community, participatory design*

1. INTRODUCTION

The growing trend of colorful village in Indonesia has triggered numerous applications in villages or 'kampung' across the country. Colorful village design was firstly initiated at Kali Code area, Yogyakarta, at the early 80s. Located by the Code river bank, the village was transformed from a slum area with most of its residential made from bamboo material, into a colorful village. A similar example with Kali Code Village Yogyakarta is located in Malang City, at

Jodipan Village. The village that previously had such grim atmosphere, is also located by a river bank.



Figure 1. The colorful of Kampung Code Yogyakarta and Kampung Jodipan Malang.

Later on, the colorful village trend was adopted by Surabaya city officials, by decorating villages along the Kenjeran Coast. It was part of the city's priority program, to promote coastal tourism by attracting local tourists to visit fishermen villages and its surrounding maritime areas.



Figure 2. The colorful of Kampung Cumpat Kenjeran.

The main issue from the development of colorful village models comes from the absence of change concerning healthier life style and environmental awareness. Waste management remains a big problem at the villages because it is still not sorted and processed properly. Instead of merely for decorative purpose, mural art however, has the potential of educative medium; to cultivate better environmental responsibilities. Furthermore, mural as an urban public art has both the esthetic and social aspect. According to Marschall in Setiawan, in some situations, mural could act as catalyst for social or political change by developing community awareness, voicing social critics, and in some cases, to foster actions. [1] This work could apply participatory design method by involving its end user, or in this case the village or community members themselves. According to Kardinata, in the beginning, the participatory methodology was mostly applied to urban planning until its latest development in the design field called it Participatory Design (PD). Throughout its journey, the PD method gained momentum through research activities. Also called the Scandinavian approach, PD is about integrating end-users into the development (prototyping) phase of a project. The development of technology at the end of this decade (1960-1980s) witnessed the shift in DP from social methods (in community development) to technological ones. [2] Moreover, the notion of participatory design method is defined as follows Hannington and Martin:

“Participatory design is a human-centered approach advocating active user and stakeholder engagement throughout all phases of the research and design process, including co-design activities. Methods include cultural probes, diary studies, photo studies, collage, flexible modeling, and creative tool kits and design workshops. Participatory design respects the creative insight of participants to inspire and help guide the design process, and to respond to design outcomes. However, participant input is paired with design expertise, supporting the creative authority of designers to translate collaborations into design criteria, services, and artifacts”. [3]

1.1. Related Work

There is some research work done in the area of the mural for certain communities. The existing research is conducted by Susanti, Widyarko and Ilmiani to create a public space through the mural medium at abandoned space in Kampung Palsigunung. This research involved the community to create their mural. Meanwhile, in the process, the researcher role as a facilitator and an expert to develop a mural to guide community. Side by side the researcher and community has been identified their problem and the solution to create a proper public space with mural. [4] Another research is conducted by Wahyudi, Natadjaja, Wicandra, and Waluyanto, which attempted to explore the extent to which people can participate in mural activities conducted at TK YBPK Sekar Indah Malang by using an interpretive phenomenological paradigm approach to investigate value of the subjectivity of the community as informants who participate in mural training at the GKJW Tunjung Sekar Church. The results of this study indicate that the community does not necessarily want to be involved in mural activities, even though they like murals, self-confidence and the feeling of being unable to draw are still the main obstacles. [5] Lastly, the research which is conducted by Wijaya and Agustin, aims to preserve the folklore from Jember by designing mural recommendation of three folk tales of Jember city along with a guideline for how to work it when involving the community. [6]

1.2. Purpose

The problem statement of this research is, how to develop a sustainable design for Cumpat Kenjeran Colorful Village through educative graphic mural for raising local community environmental responsibility, by applying participatory design method? Furthermore, the research aims to improve the community’s lifestyle and environmental awareness, through the application of educative graphic mural. The work is conducted collaboratively by the research team and the community members, by highlighting the issue of environmental cleanliness and the village identity.

2. METHOD

2.1. Participatory Design Method

This method is also known as co-design, because the design is implemented based from the data collected

by the researcher, who also acts as facilitator. The primary data is sourced from the community. The data is recorded by using photos to capture narrative stories during the data collection, visual journals, sketches and collage of ideas from the participants. [3]

2.2. Mural Design Development Method

2.2.1. Data Analysis

Data collected from the application of participatory design method were processed and synthesized into useful information for the design development stage, namely: perceptions, feelings, problems and hopes for cleaner environment. All were aspired by the community members at Cumpat-Kenjeran Surabaya colorful village, and later on were developed into priorities of content.

2.2.2. Design Process

This stage was initiated through literature study on resources relevant to mural design, illustration, coloring and participatory design. The next stage was to develop idea from the interpretation of information (which were collected participatively from the community members). Moreover, as stated by Armstrong and Stojmirovic, regarding to participatory design method, the users (community) member contributes to make some sketches or doodles, photographs, words, movement, etc to develop the design concept. [7] This contribution could be user-content in participatory mural project. After the ideation, the research team as a designer facilitates making a design that is following the inspiration and expectations of the community. The involvement of mural making by the community determine the success of mural completion in collaboration with the research team as the facilitator. According to Ho, as the result, the value and meaning of community murals are not only from the final product but the art learning process, as well as the experiences, gained when involved in mural work. [8]

3. RESULT AND DISCUSSION

Aside from observational method, participatory design method was applied to involve community members during the research and graphic mural execution stage.

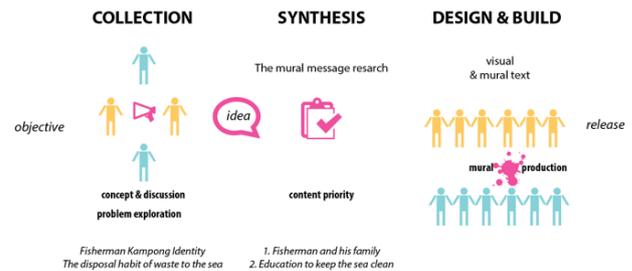


Figure 3. Participatory design diagram for the mural at Kampung Cumpat Kenjeran.

This research exemplified participatory design and was in line with the art of participation, demonstrated by frequent involvement of the community members in the artwork creation process. The process of creation is more defining than the ‘final product’. Within this circumstance, designer has become equal with the community members as the recipients of the mural messages. Citing Bishop in Hapsoro:

“This form of art is born out of traditional art form that we’re familiar with: paintings, sculptures, graphics, videos and even performances. The term relational aesthetic (coined by Nicholas Bourriaud) is applied to aesthetically assess forms of art that take part socially, collectively, collaboratively, dialogical (with many parties) and finally, to position art as a social phenomenon identical to exchange of knowledge. This form of art also alters the concept of artist’s authorship. Artist is no longer superior in the process of creation because of his/her dependency to other actors. Aside from that, it questions the concept of artist’s craftsmanship and brings the artist closer to the role as organisator or activist”. [9]

3.1. Stages of Participatory Design Research

3.1.1. Data Collection: Observation at Cumpat Kenjeran Village

Cumpat Kenjeran is an old fisherman village in Surabaya. It is located in Bulak area, opposite of Bulak Fish Centre and along the coastline just beside Taman Suroboyo (Surabaya Park). The village was revitalized by the Surabaya city government and recently also known as Bulak colorful village. In this stage, researcher has observed the real condition in the village.

3.1.2. *In depth interview with the local fisherman figures at Cumpat Village*

During this stage, the researcher applied a strategy to communicate the objective of creating graphic mural to 11 community representatives who were fishermen themselves. It was followed up with a discussion forum to gather perception, feelings, problems and the hope from the community towards a cleaner and healthier environment. The fishermen group wrote down and drawn their aspirations and later on, the papers were put on the wall to facilitate early brainstorming stage. As explained by Armstrong and Stojmirovic regarding to participatory design method:

“The best participatory design solicits content from users-visual form, thematic content, physical movement or action-and then translates it into something greater than the initial contribution. In this way the designer provides value to users, rewarding them for their participation, typically, in a nonmonetary way. The initial contributions are simple, easily carried out by the user: a photograph, a sketch, a doodle, a word, a movement, a vocalization, a touch. But when into the context of a larger participatory project, user content flourishes in unexpected ways” [7].



Figure 4. Location observation and depth interview with the local fisherman community.

3.1.3. *Synthesis*

After collecting ideas from the community representatives (fishermen), the researcher team started to explore which idea best speaks out the identity of Cumpat Kenjeran fisherman village. The findings were analyzed by correlating the most prioritized ideas with the observation result. The discussion with the community showed that they are proud with their profession as fisherman, as they are able to make living for their families. Other important note, according to the fishermen, young generation at Cumpat Kenjeran village is not attracted to the profession. If this continues, there will be no regeneration in the community and risk the identity as fisherman to vanish.

This concern would be the message of the mural, highlighting the value of fisherman profession, which is identically known as a fisherman village. The idea to voice issue of environmental cleanliness was also reflected from daily experience, whereas the villagers still dispose their waste to the ocean.

3.1.4. *Design and Build (Design Development) Process of Visualizing Ideas from Fisherman Community at Cumpat Colorful Village*

Brainstorming is an effort to interpret verbal ideas into visual representation on the mural. Several signifiers that represent the ideas were developed and constructed into meaningful message: The Resilient Cumpat Fisherman Village and The Ocean Cleanliness.



Figure 5. Ideation and concept development.

3.2. *Collective Mural Coloring*

3.2.1. *Mural#1 The Portrait of a Fisherman and His Family, by the community members and researcher team (co-design)*

The stage of designing the mural was an important part of this participatory design method. The villagers themselves painted the wall, using guidance from the picture design and tutorial provided by the facilitators (researcher team). On this participatory design, the researcher team was expected to also carry the role as expert facilitators and to have the ability to cooperate with the design user, or the community of Cumpat Village, as Taffe proposed:

“...that Participatory Design (PD) applied to graphic design will not lead to designers losing their occupational status or become invisible as feared. By embracing PD, graphic designers rather embrace a facilitation role, transforming their creative skill into the design of mediation activities. The benefits of this

are that the design outcomes produced in a PD setting promise to be more useful and appropriate for end-users. If designers accept, they are not the only experts in respect of the communication task, they may find that embracing a facilitation role introduces a new dimension of creativity into design, the development of effective design activities empowering end-user participants to release their own creativity and problem-solving capacity". [10]

The result might be not as perfect as if it was done by the mural experts or the researcher team who has art background and skill in drawing. The special quality of this process was the ownership and confidence from the community members, as they were motivated to participate and to complete the mural for the cause of environmental cleanliness at Cumpat Kenjeran Surabaya colorful village. The first mural titled 'The Fisherman and His Family' has been developed by several community members, from children, adolescents to adults.



Figure 6. Mural#1 The Portrait of a Fisherman and His Family, by the community members and researcher.

3.2.2. Mural #2 The Ocean Is Not for Dumping, by the community members and researcher team (co-design)

The second mural is located on the right wing of the Hamlet Council building, highlighting the theme of environmental cleanliness at Cumpat village. This is to respond the low awareness of the locals and visitors in keeping the neighborhood clean; including the habit to throw garbage to the sea. The situation is concerning due to findings that many marine biotas consumed the colorfully attractive, but harmful plastic waste. A tortoise eating plastic waste is illustrated on the mural, the background shows drifting plastic waste in the deep

ocean. The design adapted to align with the two shapes. On the top of the rectangle, there is an illustration of two children on the boat with a fisherman. One of the children is looking through a binocular. Ironically, the ocean is polluted and the life of marine biotas are threatened. Written on the upper part: 'The Ocean is Not for Dumping', and on the lower left: 'throw your litter properly'. Later on, a garbage bin will be put near the writing. While on the upper right side, the writing: public toilet, also functions as a wayfinding signage.



Figure 7. Mural #2 The Ocean Is Not for Dumping, by the community members and researcher team.

Interestingly, during the creation of the second mural, most participants were female teenagers and children, compared to the first mural which was dominated by the males. This phenomenon similar to the research of Kusumaningdyah and Purnamasari, has found that to build inclusive drawing or mural public space with vulnerable populations such as children. Kampung Layak Anak place-making project has involved multi-level children participation. First, "adult initiated but shared decisions with children" in the ideation stage. The second level, categorized in "consulted and informed" in the mural implementation. This research has shown that adult initiated this activity and then the children became the participants. [11] Furthermore, this was an important finding whereby participatory design model could also strengthen the community. They worked together to complete the mural after the researcher team (also the designers) sketch it. As stated by Dixon (cited from Armstrong and Stojmirovic):

"Through the participatory projects, designers establish platforms for social interaction. The give and take between user and user) become an ongoing conversation. These conversations lead to connections, and connections lead to community in turn. Designers

as community builders add value to and are valued by public that is increasingly eager for engagement”. [7]

3.3. The Benefits of Mural Design for The Community at Cumpat Kenjeran Village

The mural development process had stimulated interactions among community members as they worked together to paint the wall. Even though the design was developed by the researcher team (who also acted as designer and facilitator), they did not have full control to direct the community on its application. Here lies the characteristic of participatory method, designer cannot pursue an impeccable formal aspect of the artwork, but there has to be a negotiation process. The community was able to gain knowledge and skill on painting technique, even though it's not perfectly neat. The highlight was on this co-design process, a close and mutual way of creation. The researcher team (who also functioned as facilitator and designer) and the community were equal. This is the expected outcome of participatory design method, whereby the audience (as the message recipient) are involved as collaboration partner, particularly when this method is applied on social design work and has element of community strengthening. Marschall on his study about mural art community in Dubai, South Africa, identified benefits of participatory mural for the community: [1]

- a. To create public awareness
- b. To voice social critic
- c. To strengthen the community identity
- d. To reinforce social action
- e. To provide means of expression and to strengthen one another
- f. To allow community ownership of their own neighborhood
- g. To give back a sense of purpose in the community who is socially disadvantaged
- h. To channel energy into more positive way (reducing violence)

When correlated with the benefit of community-based-mural-art, the development process involving community members was aimed to create public awareness on the message from the second mural, “The Ocean is Not for Dumping”. The mural instills the message to those who read it, particularly on daily basis, and hopefully would change their habit of ocean dumping. According to Opoku-Assare, to overcome environmental degradation in society, art media such as mural executed by students in a community itself.

Community participation in making the mural helps to communicate the mural images and messages that are considered to be the most appropriate to the life experience in their place of residence. Execution by students can shape the identity and self-esteem of students because they are environmentally responsible in their communities. In the end, the mural can become a vehicle to motivate residents to immediately clean up the environment where they live. [12] Moreover, the benefit of strengthening the community identity and allowing the community to take ownership of their neighborhood were contributed from the message of the first mural, titled *The Fisherman and His Family*. The expected outcomes are sending clear message about the local identity of the village (both to visitors and the community) and higher pride regarding to the community profession as fisherman who could make living for their family and village. This would hopefully encourage young people to take part in the profession's regeneration process. Other benefit, the mural provided means of expression (both individual and communal) and to channel positive energy (reducing violence). As stated by Wilkie, the murals, themselves, possess the power of imagery and metaphor that may also aid in individual and collective healing and serve as a tangible representation of expression. Mural making, as a community art project, was found to create opportunities to foster community, enhance a sense of belonging and social awareness, and create connection to others, self, and place. [13] This was observed when many young people and children enthusiastically participated to paint the mural. Regardless, this was also part of the designer's responsibility to ensure the community empowerment and strengthening process were assisted properly.

4. CONCLUSION

Participatory design research method could bridge a process of collaboration to create mural design medium with the community of Cumpat Kenjeran colorful village. It included the process of data collection, synthesis and mural design development. The expected outcome, community's participation on the process of creating the artefact or mural, has also provided new experience and knowledge for the community members, particularly on how to create mural design for their village. A sense of belonging from the community is built, especially because they participated in creating the mural. This co-ownership and pride put more values on the public space, where the community interacts and

does recreational activities. Although the characteristic of this participatory design method has limitation to not fully involving the community members, for example during the stage of early sketching and layouting, or sketch application on the wall, the community took part during the design development process and the execution of the mural design. They worked using guidance from the final design made by the researcher team, who also functioned as drawing expert and supervisor of mural execution. The perfection of formal aspect is not pursued in participatory method, but it is the process of co-creation itself that has made the researcher's position with their audience, the community of Cumpat Kenjeran village, as equal.

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