

Continuous Empowerment for RW 10 Sukapura Riverbank Community - LeX Singapore Polytechnic & Universitas Pelita Harapan September 2023

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ABSTRACT

RW 10 Sukapura is in North Jakarta City and identified by the North Jakarta Housing Municipal as one of the riverbank poor settlements. In 2021 to 2022 the community received empowerment and physical infrastructure refinement program from the government collaborating with School of Design, Universitas Pelita Harapan (UPH). Continuous empowerment in a form of partnership is a key to achieving a degree of delegated power and citizen control as a genuine community participation and

empowerment sustainability. To achieve that, in 2023 the School of Design, UPH partnering with the Singapore Polytechnic came back and work collaboratively with the RW 10 Sukapura riverbank community using Design Thinking methods. The collaborative research-design-action activities are aimed to initiate social innovation design for the community in three areas: river pollution, children education, SMEs products, as the continuation to empower the community.

Keywords: RW 10 Sukapura, Riverbank, Design Thinking, Social Innovation Design

INTRODUCTION

RW 10 Sukapura is in North Jakarta City and identified by the North Jakarta Housing Municipal as one of the riverbank poor settlements. It is located in the riverbanks of Cakung Lama River with around 7 km lengths, making them one of the longest urban kampong in Jakarta.

The kampong is settling there from almost 60 to 70 years ago, yet with unclear land status until now. In those long spans the kampong becomes very dense, which brings many problems including polluted rivers, scarcity in water, poor utility and sanitation, inappropriate building and many others. However, as in many urban kampong anywhere, the social and cultural lives thrives on as diversified community lives there. It also has some economical home industries activities such as tempeh and snacks.

In 2021 the community received Community Action Plan empowerment program from the government collaborating with School of Design, Universitas Pelita Harapan (UPH) (SoD UPH and SDPRKP Jakarta Utara, 2021). The results from CAP were then implemented in 2022, where the government and the community worked together improving the physical infrastructures (i.e.: road, sewage, etc.). According to Arnstein's' ladder of participation (1969) continuous empowerment in a form of partnership is a key to achieving a degree of delegated power and citizen control. These are the degrees of citizen power where it reaches genuine community participation and empowerment sustainability.

To achieve that, in 2023 the School of Design, UPH partnering with the Singapore Polytechnic came back and work collaboratively with the RW 10 Sukapura riverbank community using Design Thinking as a method (Brown, 2008; Brown and Katz, 2009) to initiate social innovation design ideas (Brown and Wyatt, 2010; IDEO, 2015) in a program called Learning Express (LeX) (Singapore Polytechnic CDIO, 2023).

The collaborative research-design-action activities (Katoppo, 2015; Katoppo, 2017) are aimed to address three areas of problem and potential in the RW 10 Sukapura riverbank community, which are: river pollution, children education, and SMEs products, as the continuation to empower the community.

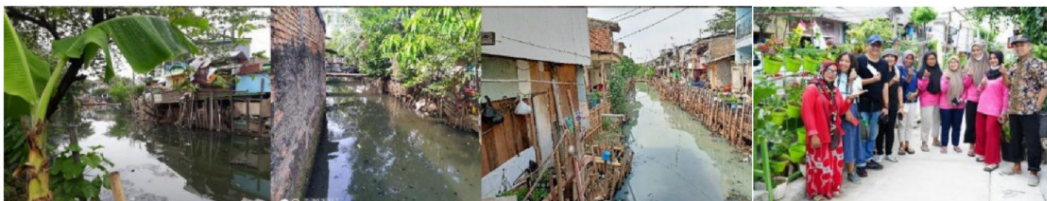


Image 1 RW 10 Sukapura Situation. (Source: Author, 2021-2023)

LITERATURE REVIEW

DKI Jakarta Important Issues in Propagating City Slums Area

The Jakarta Public Housing Provincial Government acknowledged 5 important issues that would propagate city slums area: incongruous land use, insufficient quality of infrastructure, inconsequential conditions of the community socio-cultural situation, incapable economic situation, and mishandling governance system (Dinas Perumahan Rakyat dan Kawasan Permukiman DKI Jakarta, 2020).

Sustainable Development Goals & new Urban Agenda

In conjunction with these issues, it is important to look at the 11th goal of the 2030 Sustainable Development Goals, which stated we need to achieve sustainable cities and settlements, which is accessible to everyone where housing and settlements should be adequate, safe, and affordable, with all access to basic urban services (United Cities & Local Government Asia Pacific & DKI Jakarta Municipal Government, 2015). In line with the 2030 SDGs, the New Urban Agenda (NUA) (United Nations, 2017) was declared at the 2016 UN-Habitat 3 conference with the NUA's main objective is 'Cities for All', which is committed to promoting the development of cities and settlements that are more inclusive, non-discriminatory, and sustainable. This has consequences for the urbanization process that cannot be prevented because the spirit of inclusiveness in urban development needs to be translated as an effort to create a city for all, including the newcomers.

Here are the following of NUA principles of sustainable urban development:

1. *Leave No One Behind (Equality for All)* – This means that a sustainable city ensures that everyone has an equal opportunity to access basic urban facilities and infrastructure.
2. *Sustainable and Inclusive Urban Economies* – Sustainable cities ensure an inclusive and sustainable economic situation by developing local economic activities and providing opportunities for everyone to have decent work.
3. *Environmental Sustainability* – A sustainable city ensures environmental sustainability, in which: protects ecosystems and biodiversity, mitigates and adapts to climate change, changes consumption and production patterns, and adopts a healthy lifestyle in harmony with nature.

Genuine Participation

According to Arnstein (1969) there are 3 degrees of community participation:

1. Non-Participation, consisting of manipulation and therapy: where the community is only an object of improvement or education recipients from the

- powerholder.
2. Tokenism, consisting of informing, consultation and placation: where the community involved in a limited ways decided by the powerholders.
 3. Citizen Power, consisting of partnership, delegation, citizen control: where the community is in an equal position with the powerholders and has control to decide needs.

Arnstein argued that the last degree is genuine participation. Therefore, it will ensure empowerment sustainability.

Design Thinking & Social Innovation Design

Design Thinking is developed by Tim Brown (Brown, 2008; Brown and Katz, 2009). DT is a method of thinking that is comprehensive, carried out collaboratively, and oriented towards human needs (*human-centered*) aimed at innovation to ensure its sustainability.

According to Brown and Katz (2009), design thinkers must have empathy, integrative way of thinking, optimism as a value, fond of experimentation, and loves collaboration. DT is also very suitable for producing social innovation design because it can quickly capture community needs through community engagement, transform data into concepts, and finally translate concepts into prototypes that precisely target community needs in a social situation (Brown & Wyatt, 2010).

METHODOLOGY

Learning Express Program is a 12-day program initiated by Singapore Polytechnic, where SP lecturers and students cooperate with another educational institution in Asia to work with the underserved local community. It aimed at solving the community's problem using Design Thinking (DT) method by creating social innovation design.

Hence, the LeX research-design-action activities done by Singapore Polytechnic and School of Design, UPH done in the 3 stages of DT (Brown, 2008; Brown & Katz, 2009; IDEO, 2015):

1. *Discover*: In this phase a collaborative teams will do preliminary research to have sense and sensibility on the matters, empathize by conducting interviews with the community member and immersing into context, generated insights, and defined statement of need.
2. *Ideate*: In this phase data from the *Discover* phase will be used to generate ideas into concepts.
3. *Prototyping*: In this phase concepts generated from the *Ideation* phase will be developed into prototypes that will be iterated and refined.

The LeX collaboration between Singapore Polytechnic and School of Design, UPH in the RW 10 Sukapura riverbank community, involved 6 lecturers and 40 students from both schools.

RESULT & DISCUSSION

Discover Phase

The Discover phase was done by doing sense and sensibility and empathy. In the sense and sensibility stage, the LeX Team did preliminary research on riverbank pollution, urban kampong density problem in Jakarta, and SME's initiatives for poor communities. Sinaulan, et. al. (2013) argued that Ciliwung river (as the main river that Cakung Lama river connected) deteriorated and polluted conditions has been occurred due to the human behavior. The poor settlement density on the riverbank produced domestic waste that highly polluted the river. Henceforth, education for young generation is a necessity, although according to UNICEF reports on the State of Global Learning Poverty (UNICEF, 2022) 57% of children by age 10 were not acquiring minimal proficiency in literacy. On the other hand, informal SMEs in poor dense community is one of the potentials to increase an inclusive sustainable local economic situation (United Nations, 2017), and the community resiliency (Asian Development Bank, 2022).

In the empathy stage, the LeX Team done 3 things: understand user context by immersing and conducting interviews with the RW 10 Sukapura riverbank community members, generated insights, and defined statement of need. The process took 3 whole days, and it is generated 1 problem and 2 potentials with specific statement of needs (How Might We (HMW) *question*) (Brown and Wyatt, 2010; IDEO, 2015):

- 1) The main problem is the pollution of the riverbank, which is mostly caused by the community's ignorance towards it. Thus, the HMW question is: *How might we encourage RW 10 Sukapura Community to maintain a healthy relationship with the river and revitalize the riverbank community?*
- 2) The 2 potentials from the RW 10 Sukapura riverbank community:
 - a) The free-education initiatives by one of its community members, though it has limited resources and funding. Thus, the HMW question is: *How might we help the resource poor RW 10 Sukapura self-initiated school to provide sustainable and affordable education for the children and youth?*
 - b) The SMEs economic potentials of tempeh making home industry and fruit peel enzyme initiatives as a sustainable initiative to managed and recycle organic waste. Thus, the HMW question arose is: *How might we assist the SMEs in RW 10 Sukapura to become more efficient and enhance the productivity of their products?*



Image 2 Discover Phase: *Interviews and Immersing in the Context.*
(Source: LeX SP-UPH Team, 2023)



Image 3 Discover Phase: *Generating Insights & Define Need Statement.*
(Source: LeX SP-UPH Team, 2023)

Ideation Phase

The Ideation phase was done by generating ideas, developing ideas into concepts and selecting design concepts (Brown and Wyatt, 2010; IDEO, 2015). In this phase, the LeX Team used the research and findings from the Discover phase to ideate. The LeX Team discussed and brainstormed the How Might We questions to generate ideas and develop it into concepts.

In terms of answering *'How might we encourage RW 10 Sukapura Community to maintain a healthy relationship with the river and revitalize the riverbank community?'* the LeX Team used the findings of importance to change first the behavior of the riverbank community (Sinaulan, et. al, 2013) and to put the community itself in charge (Arnstein, 1969) to build the community sense of belonging to the river. For these reasons, the LeX Team proposed a 'Riverbank Club' which is led by the community members. The Club will emphasize the value of environmental responsibility to maintain the river clean to the community, raise sustainability awareness on how to properly dispose of the home-waste, and as a catalyst to increase the sense of community to take care of the riverbank.

Having a self-initiated school for children and youth is a powerful potential that the RW 10 Sukapura riverbank community has as it responded very well to the usual education limited access in the poor settlements (UNICEF, 2022). Thus, answering *'How might we help the resource poor RW 10 Sukapura self-initiated school to provide sustainable and affordable education for the children and youth?'* is becoming very important as it ensures the sustainability of the proposed 'Riverbank Club'. The ideation solution for this is to provide the school with website design ideas for partnership and an example of affordable educational tools prototypes.

For The SMEs economic potentials of tempeh making home industry and fruit peel enzyme initiatives, the ideation to answer, *'How might we assist the SMEs in RW 10 Sukapura to become more efficient and enhance the productivity of their products?'* were on how to improve the production and storage system, while at the same time developing ways to expand the market scale. These ideations were in accordance to increase an inclusive sustainable RW 10 Sukapura economic situation (United Nations, 2017), and its community resiliency (Asian Development Bank, 2022).

Prototyping Phase

As the phase name suggested, in this phase the Team builds the prototype based on the ideation suggested. The team built, proposed, got feedback and refined the prototype alongside the RW 10 community, where the results were as follows:

1. 'RW 10 Riverbank Club' to manage pollution of the riverbank. The team offered an ingenious design solution to clean and maintain the cleanliness of the river: installing vertical fishnet between the RT (smaller group of community) and parallel fishnet to prevent irresponsible garbage dumping into the river, catfish farming and water hyacinth planting, and set up small kiosks where possible to live up the riverbank scenery and as economic income alternatives for the communities.



Image 4 RW 10 Riverbank Club Prototype. (Source: LeX SP-UPH Team, 2023)

2. Website design for partnerships and donation, engaging point system learning methods, and affordable D-I-Y projectors for 'Rumah Belajar' RW 10 Sukapura.

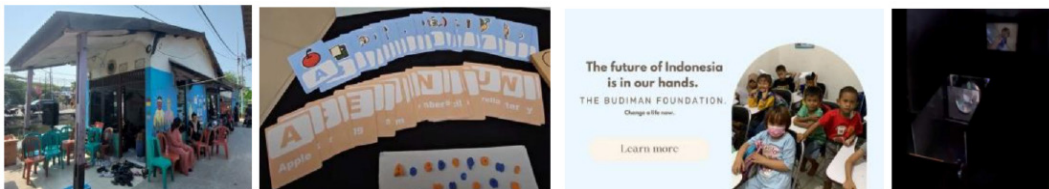


Image 5 RW 10 'Rumah Belajar' Prototype. (Source: LeX SP-UPH Team, 2023)

3. Tempeh storage humidity sensor, soyabean transfer device and digital marketing solutions for the tempeh making home-industry and an attached motorcycle box to carry the fruit peel enzyme products, brand and packaging for the products and digital marketing solutions to reach a broader market within and outside RW 10 Sukapura area.



Image 6 Production & Marketing Tool Prototype for RW 10 Sukapura SMEs.
(Source: LeX SP-UPH Team, 2023)

The prototypes were then exhibited in the Gallery Walk, where the LeX Teams invited all the stakeholders (the community leaders and members, government officials, NGOs, as well as private sectors) to a short exhibition at Universitas Pelita Harapan. The Gallery Walk serves 2 purposes: 1) as an event to handover the prototype to the community in hope fostering partnerships with the other stakeholders, especially the government (Arnstein, 1969; United Nations, 2017), and 2) as a trigger to new ideas and innovations as a form of continuous and sustainable empowerment for RW 10 Sukapura riverbank community (Katoppo, 2017).



Image 7 Gallery Walk. (Source: LeX SP-UPH Team, 2023)

CONCLUSION

The Learning Express (LeX) Program is intended to initiate and trigger social innovation within the targeted community and foster partnership with all the stakeholders involved (i.e.: the government, NGOs, and academic institutions). It is done by the collaborative prototypes making (Brown and Wyatt, 2010; IDEO, 2015) for RW 10 Sukapura riverbank community addressing problems of river pollution and potentials of self-initiated children education and local SMEs. All this collaborative and partnership activities were aimed on opening the Arnstein's Citizen Power degree (1969), pushing genuine and sustainable RW 10 Sukapura riverbank community continuous empowerment.

The social innovation designs proposed were also in accordance with the 3 NUA principles of sustainable urban development (United nations, 2017), which are:

1. *Equality for all* – by enhancing the affordable teaching and learning experience in the self-initiated RW 10 Sukapura school for children.
2. *Sustainable and Inclusive Urban Economies* – by developing production optimization and designing physical and digital marketing tools for RW 10 Sukapura SMEs.
3. *Environmental Sustainability* – by proposing RW 10 Riverbank Club, as an autonomous community group that will ensure a healthy relationship between the community and the river, as well as the river cleanliness revitalization initiatives.

However, the LeX Team also acknowledge that it is still a long way to really ensure the sustainability and the continuity of RW 10 Sukapura riverbank community empowerment, especially in reaching Arnstein's ultimate ladder, which is citizen control (1969).



**Image 8 LeX SP-UPH Team w/ the RW 10 Sukapura Community.
(Source: LeX SP-UPH Team, 2023)**

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