



Reflection Paper P4
Reflow the Kampung

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Reflection Paper: "Reflow the kampung"

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Index

Introduction	Page4
Aspect 1 - The relationship between research and design	Page 5
Aspect 2 - The relationship between the theme of the graduation lab and the subject/case study chosen by the student within this framework (location/object)	Page 6
Aspect 3 - The relationship between the methodical line of approach of the graduation lab and the method chosen by the student in this framework	Page 7
Aspect 4 - The relationship between the project and the wider social context	Page 7
Conslusion	Page 8

Introduction

Kampungs are the districts where the Indonesian inhabitants have been living for decades. These kampungs are most often unplanned areas which increase rapidly by self-building methods of the Indonesian residents. These habitats are characterized by highly densities spaces.

Due to the rapidly changing textile industry, the kampungs facing major problems, which are difficult to change themselves.

A lot of migrant workers moved to these kampungs to live there and work in the textile factories. This causes major problems for the original inhabitants, the kampung and the environment. As described in my research paper, floods, inadequate sanitation, lack of 'clean' drink water, polluted rivers, air pollution and waste all over the place on the kampung streets are problems which the kampung has to deal these days.

I started my graduation with a huge fascination for a sorts of flow schemes. In the first weeks this changed to the question how can I reflow the water streams in the kampung to tackle problems as described above. In this context is waste so integrated in the water problems that I choose to implement this in my new flow strategy. This idea led to my overall design question: 'How can a community building in the kampung reflow the water and waste cycles to improve the living qualities for the residents in Bandung, Indonesia?'. To find out, I need to know more about the technical aspects of water and waste cycle improvement, which led to my technical research question: 'how to improve the water quality in the kampung by managing all the water flows with a purification system where waste management is integrated?' The conclusion of this technical research is a new more optimum flow scheme for the specific kampung Chigondewah in Bandung.

Aspect 1 - The relationship between research and design

To find answers for my technical research question as mentioned before I focused my research on three different parts.

First of all the existing water and waste flows in the kampungs, secondly on water purification techniques which can probably be used in the kampung, and the last part on how waste can be managed in a different way which is more sustainable and were reuse is the main factor.

To develop a new flow scheme for the water and waste streams it is important to know how the existing flows work in the kampung to integrate this in an urban design. I mainly research this part by field research and interviews during my stay in the specific kampung. This research ensures me more insight in what is needed in the urban design plan. This leads to my program space and the dimensions which I need to implement in the design. Factors for instance where for the water storage, the sanitation facilities and the amount of drinking water which is needed. What particularly struck me during fieldwork is that most original kampung residents know very well what the problems are, but they are not able to tackle them. They have goodwill, which beforehand I did not imagine.

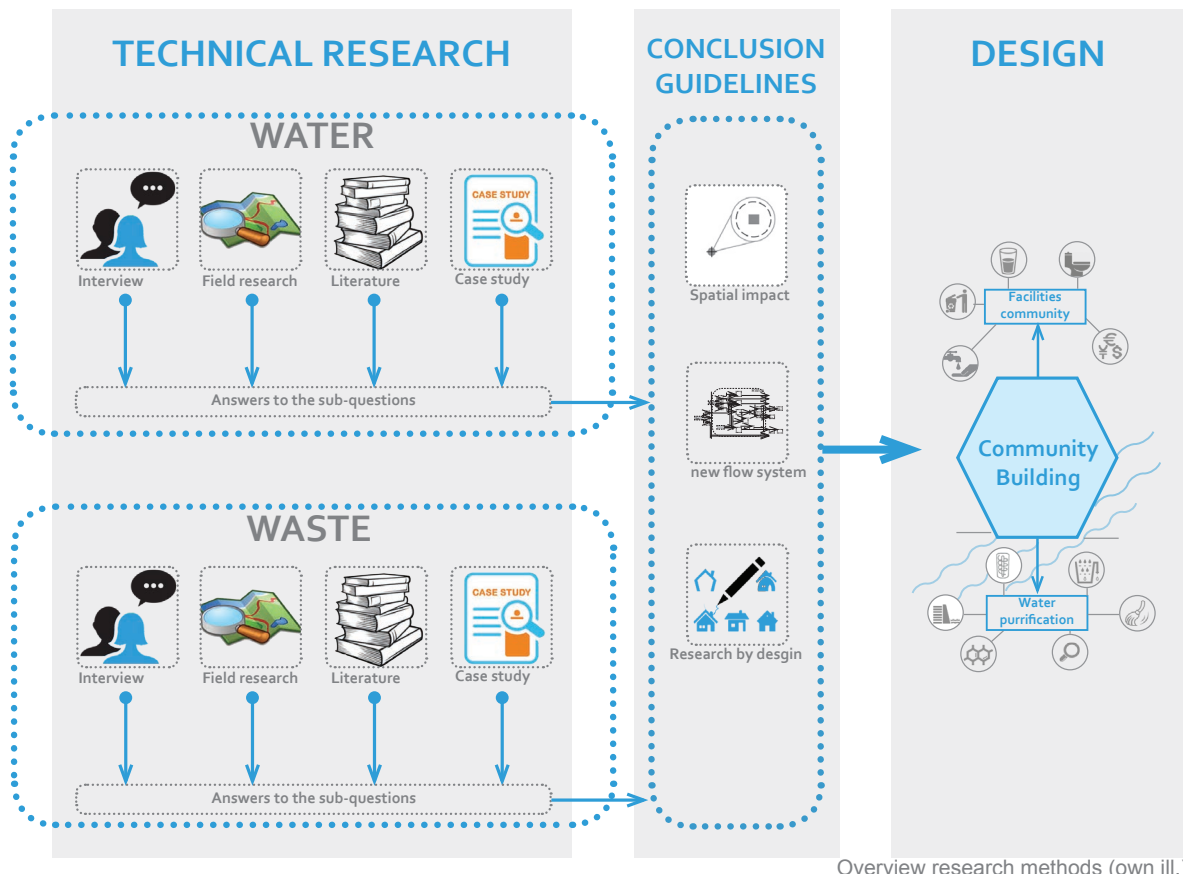
The second part of the research, different water purification techniques, have been researched. How can these been connected to each other and to the facilities and what measurements should they have. By connecting the best purification technique for purification to the specific kampung and there number of inhabitants I figured out what the spatial impact will be for the kampung. During my design I used the measurements which I found out during the research phase. In the design part I discovered that it will have more spatial impact on the context than I initially thought. That is one of the reasons why the final design has become more spatial impact than the preliminary design. Finally this gives the design more architectural valuable, which makes the design a more attractive place for the residents. My first idea was to design a building which houses all the functions. However during my technical research I found out that this idea could not cover the stated problems, so the design became a more landscape structure, where different facilities from the new flow are situated under a huge structural bamboo roof.

The last part of the research I provide myself with more insight in how the waste flows, how the residents deal with their household waste and the care about the problems this causes. This part of the research has also led to programmatic dimensions. After my P2 presentation I decided to drop some of the waste processing out of the design for the kampung, because this parts can better be done on a bigger scale. So the part of processing is included in the new flow chart, but is not part of my final design.

Aspect 2 - The relationship between the theme of the graduation lab and the subject/case study chosen by the student within this framework (location/object)

The relationship between the theme of the graduation lab and the subject that was chosen for the design is quite clear. The graduation lab I followed is the Intecture studio of the master track Architectural Engineering. As the name already mentioned this studio focusing on the architectural part as well as the engineering part.

I started the graduation studio with my fascination for flow schemes and similarly the context of the kampung areas in Bandung, where I want to do my research and design. To make a design that might actually work, technical research is needed. To make changes in self-structured environment as the kampung is, a deliberately scheme must be the under layer for the design. The utmost importance in the new flow is what the residents gets in advanced, to make the switch and to make the system work. The AE studio gives the opportunity to combine your technical fascination to your graduation design. The challenge is to give the kampung in Bandung a new way of dealing with the flows.



Aspect 3 - The relationship between the methodical line of approach of the graduation lab and the method chosen by the student in this framework

The Intecture graduation studio starts with a fascination which leads to a technical research question and an overall design question. You have to figure out yourself how your research part will look like. For me it was quite hard to find the right boundary lines for my research in the first phase (P1). The reason is that I can imagine how the kampung works from the stories of Monique Smit and other students who have been in the kampung, but at that moment I had never experienced it myself. It was difficult for me to focus my research. In this phase I was struggling with the specific problems I want to tackle. The preparation for the fieldwork was quite clear, I knew what I want to find out in the kampung and I prepared myself with interviews. While looking back the interviews with the residents were very interesting, I did not always get the information I was looking for, but instead the residents provided me with more insight about aspects I had not thought about.

After the field research I had a better idea about what I want to research with my design, so the boundary lines of the research can be determined better.

After the P2 phase I thought it would be easy to implement my findings in an architectural design, however during the design the assumptions were hard to implement. The main struggle was to deal with the different scale factors of the design. My plan focusing on a new flow scheme which means actually an urban scale level, but I also want to focus on more specific details in the plan. Constantly switching between the different scale levels during the design phase was harder than I imagined.

Aspect 4 - The relationship between the project and the wider social context

In my graduation the relation between my research and design is quite clear in the wider social context. The goals I set for this design is to create a better structure for the residents, the kampung itself and the environment in terms of water and waste flows. In order to have an impact on the new way of waste and water behavior, it is important to change their mindset to a more sustainable one. In my opinion this can be done best by giving the residents something specific back. So if the residents process their own produced waste in a proper way, they get clean drinking water in return. My design provides clean drinking water flows and the purification of the used water in a proper way. I think this will be the best for the kampung and their inhabitants for now and in the future. Also this approach is better for the environment in the longer terms.

Conclusion

In terms of planning I recognized myself during the first phase (P1) of my design. My focus was too broad oriented, so I was searching for a long time to a more specific research and design task. What I also recognize myself is my workflow, design discussions I often postpone which make it difficult when you work on different scale levels to bring the plan to a higher level. When time pressure starts, I can make these choices. Writing a graduation plan helped me staying on track, without the plan I think I would not finished the research and the design in time.

Finally, I want to thank all the tutors who helped me during the graduation process by constant reflecting me on the plan and research and who advised me in times when I was stuck in the process.



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