Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences
Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

<table>
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<tr>
<th><strong>Personal information</strong></th>
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<tr>
<td><strong>Name</strong></td>
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<td><strong>Student number</strong></td>
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<td><strong>Telephone number</strong></td>
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<th><strong>Studio</strong></th>
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<td><strong>Name / Theme</strong></td>
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| **Teachers / tutors** | M. van Dorst (First mentor)  
L. Qu (Second mentor) |
| **Argumentation of choice of the studio** | The project is focussing on Bandung, Indonesia’s third largest city. The city has had a rich colonial history, with the Dutch player a major role in the colonial past. Bandung knew it highdays during the 1920’s of the Dutch-India empire.  
The project will look into the Tamansari kampung, one of Bandung’s urban slums, which is located on the formal green backbone of the city, showing the importance for a historical perspective to the problem. The studio will help me understand how to deal with the colonial past. |

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<th><strong>Graduation project</strong></th>
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<th><strong>Goal</strong></th>
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<td><strong>Location:</strong></td>
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<td>The posed problem,</td>
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This thesis will look into answering the following research question:

How can we re-interpret the old ‘Healthy City’ identity of the 1920’s, in order to improve the public health, and therefore the livability, whilst meeting the densification requirements of kampung Tamansari in Bandung?

This research question will be answered through answering the following sub-questions:

**SQ1** - How were the concepts of livability and health being perceived and developed in the city of Bandung during the 1920’s?
**SQ2** - What are slums and how do they develop?
**SQ3** - What is livability, and how are we able to assess it, and improve it?
**SQ4** - What is health, how does it relate to livability and how are we able to make a change in it?
**SQ5** - What are the current characteristics and problems present in kampung Tamansari?
**SQ6** - What is the current status of public health, as a sub-component of livability, in Kampung Tamansari, Bandung?
**SQ7** - What are the solutions other cities are implementing for answering similar problems?
design assignment in which these result.

The project will have a series of output-products, which each will have their own importance the realization of the final product.

**Vision**
The vision will give an insight into the most desirable future of the kampung area. It will be giving insight into how the livability and public health problems in the area can be positively developed.

**Strategy**
The strategy will look into how this ‘desirable future’ can be achieved. Where the vision is showing ‘what’ would be desirable, the strategy will answer ‘how’ this can be managed to be realized.

**Neighborhood design**
The neighborhood design will show a possible result of implication of the strategy. It will be focussing on a specific area, which can later on function as an example on how the implement the strategy in other kampung neighborhoods.

### Process

**Method description**

Since the research is taking place to substantiate the design, we’re speaking of an applied research. Applied research is the original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective (OECD, 2002).

Max Weber (1864-1920) argues that all humans are attempting to make sense of their worlds. In so doing, they continuously interpret, create, give meaning, define, justify and rationalize daily actions (Babbie & Mouton, 2008). This explanation directly aligns with the definitions of both livability and health, the two main concepts that are being addressed in the thesis. Both of these terms consists of a strong subjective assessment, as the objective elements do not directly affect the perception. (Campbell, 1976). The Phenomenological approach is an approach that aims to understand people (Babbie & Mouton, 2008), and therefore better aligns with the needed research.

The research will therefore have a bigger focus of qualitative research over quantitative research. As Schwandt explained, reality should rather be interpreted through the meanings that people give to their life world. This meaning can only be discovered through language, and not exclusively through quantitative analysis.
Research Questions

SQ1: What are slums and how do they develop?

SQ2: What is livability, and how are we able to assess it, and improve it?

SQ3: What is health, how does it relate to livability and how are we able to make a change in it?

SQ4: What is the current status of public health, as a sub-component of livability, in Kampung Tamansari, Bandung?

SQ5: How were the concepts of livability and health being perceived and developed in the city of Bandung during the 1920’s?

SQ6: What are the current characteristics and problems present in kampung Tamansari?

SQ7: What are the solutions other cities are implementing for answering similar problems?

Problem Statement

The current living conditions form serious problems for the urban health in the area. A lack of hygiene, sanitation, clean water and public space are having a negative effect on the livability of the area.

Rapid urbanization in the Bandung area leads to excessive growth of informal urbanization.

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Vision on how to improve the livability and public health in the kampung area of Tamansari.

Design Guidelines

A neighborhood design that shows a combined solution to the problems in density, livability and public health.

Outcomes

Final end result of the research will be a list of guidelines of how to improve the livability and public health in the kampung area of Tamansari.

Theoretical Framework

Slum-forming

Informal Indonesia

Kampung Improvement

Public Health

Bandung Healthy City
- Bandung Vooruit (1930), R. Vaskui (1996), L. Pijl (unknown), Gemeente Bandong (1939)

Livability

Density

Analytical Framework

- Spatial analysis
- Morphological analysis
- Socio-cultural analysis
- Socio-economical analysis

Site visit
- Field survey
- (Expert) Interviews
- Mapping of project area

Comparative research
- Kampung Kali Chode, Yogjakarta
- Kampung Pelangi, Semarang
- Kampung Babakan Ciamis, Bandung
- Vertical housing projects, Jakarta
- Vertical Kampung Tamansari, Bandung

Reflection

Table 1 - Research Framework (Source: authors own)
The purpose of research in phenomenological research is understanding and interpreting everyday happenings (events), experiences and social structures — as well as the values people attach to these phenomena (Collis & Hussey, 2009, Rubin & Babbie, 2010). In the phenomenological approach, the researcher engages in active collaboration with the participants to address real-life problems in a specific context; these are directed towards the offering and implementation of feasible solutions to the problem (Blumberg et al., 2011).

Pure research is aiming to obtain knowledge which should enable us to understand the universe and our role in it (Delbruck, 1986, Barrow & Tipler 1988). Pure research consists of both Analytical and theoretical research, which are of equal importance to it. In analytical, or empirical, research the main goal is to measure various natural phenomena (or simulated phenomena), whilst in theoretical research one attempts to capture the processes of Nature and relationships between phenomena in formal mathematical statements. (Casti, 1989).

**Theoretical research**

The main purpose of any theoretical framework is to explain and to systematize the experimental observations by a few unifying concepts (Lowdin, 1990). The exploration of these concepts will be done in the theoretical research. The components of slums, livability and public health will be researched, so we can build upon the knowledge that is already available. Because one cannot attain absolute knowledge (Benfey, 1977). The research done will have a strong deductive character. The overall definitions and lists of components of both livability and public health will be shorted into a small list, of maybe three to five components, through prioritizing components that are of a bigger importance to the area. Therefore, the general ideas and theories behind the concepts of livability and public health will be modified to a specific situation, being the problems in kampung Tamansari.

**Analytical research**

The term analytical, or empirical, refers to knowledge derived by the process of practical and scientific experience, experiments and inquiries (Skager & Weinberg, 1971). An empirical investigation involves a planned process of collecting and analyzing data — in a way that is systematic, purposeful and accountable (Isaac & Michael, 1997). The purpose of this analytical investigation is, therefore, to obtain reliable and valid data, in accordance with the research problem and the accompanying research aims.
The strong subjective understanding of the terms being addressed in the thesis, ask for a qualitative research approach. Qualitative approaches are those in which the procedures are not as strictly formalized, while the scope is more likely to be undefined, and a more philosophical mode of operation is adopted (Mouton & Marais, 1990; Delport & De Vos, 2011).

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<th>Literature and general practical preference</th>
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<td>Firman, T. (2004). Demographic and spatial patterns of Indonesia’s recent</td>
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Reflection
Relevance

Social relevance

The informal neighborhoods, or slums, lack hygienic living conditions. Slums are often characterized by overcrowding, poor-quality housing, lack of basic infrastructure and poverty (Scovronick, 2015). These different factors are what make the slum-neighborhoods unhealthy living environments. Illnesses related to the water supply, waste disposal, and garbage kill 30,000 people per day and constitute of 75 percent of the illnesses that afflict humanity (Stillwagon, 1998). The digestive-tract diseases arising from poor sanitation and the pollution of drinking water are the leading cause of death in the world (Thapar, 2004).

Scientific relevance

There are a lot of studies done on slums and informal enclaves; on how they came into existence, on similarities between slums in general and even on how to improve the living conditions in these slums. In trying to find solutions to improve slums, organization often generalize slums, and look for gereneric solutions. For example, we can see that the government of Indonesia is looking for a solution on a national scale with the Kampung Improvement Projects or the United Nations with a solution on a global scale. But every slum or informal neighborhood is created by a different context and a different set of variables. The UN's household-based definition of slums lacks emphasis on the locational aspects, and mainly focusses on aspects as infrastructure and basic services (Olthuis 2015).

Research on future densification, livability and health is necessary to prepare the kampungs of Bandung for the expected population growth, and on how we can create healthier living environments for the current inhabitants and the new flow of migrants.

Time planning

See next page.
Problem Analysis
Research Question
Theoretical Framework
Analytical Framework
Comparative Analysis
Field Trip
Design
Reflecting

Image 2: Conceptual planning of the graduation process (Source: Authors own)