

3.0 Module 3

Introduction to Observation, Problem Identification and Empathy:

18 hours (12 in school and 6 at home)

Design
Thinking



Design
Sensitivity



Exposure 1

Exposure 2

Exposure 3

Exposure 4

- Basics of user studies - primary research vs secondary research
- Basics of planning for conversations with users
- Basics of documentation methods
- Referencing and writing acknowledgements

Overall Task

Observation and Problem Identification

Task 3.1 (at School)

- Ask Questions

Task 3.2 (at School)

- Primary Research

Task 3.3 (Home)

- Secondary Research

Task 3.4 (at School)

- Collating

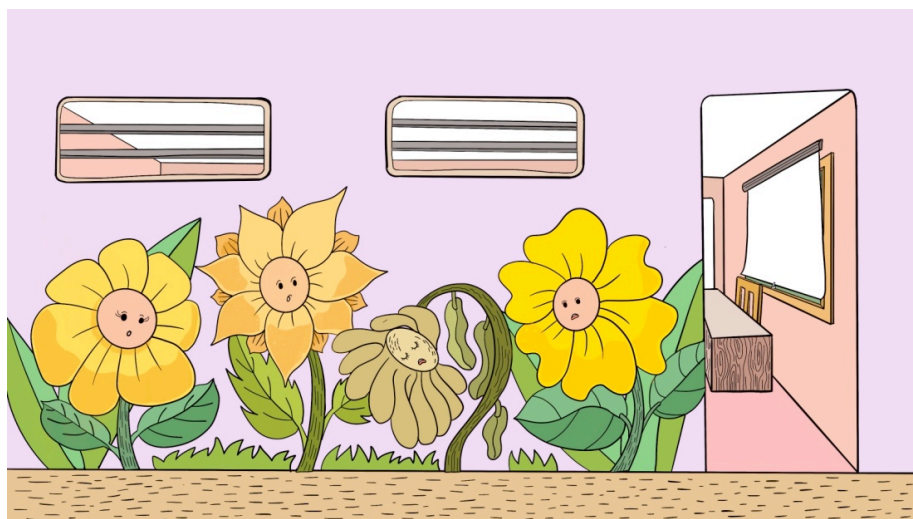
Final Output

- Make a presentation of your documentation
- + Reflections, Self Assessment and References

3.0 Module 3

Introduction to Observation, Problem Identification and Empathy:

18 hours (12 in school and 6 at home) = 18 credits



Introduction:

This module introduces the students to the beginning of the design thinking process. This being an important stage in the design process and involves the following aspects: Observation, Empathy with the User needs, Requirement finding, Investigation, Research and Study.

Aim of the Course:

To expose school students (Grade 9) to basic fundamentals of being able to identify or locate a problem to solve with the user in focus. The students will use basic research methods to observe, understand and empathize with the issues faced by the users in order to gain insights. The module will introduce the students to the basics of primary research and secondary research, making conversations, methods of documentation and doing field studies.

Place:

Place: Task 3.1, Task 3.2, Task 3.4 done at School and Task 3.3 done at home



Grouping:

Grouping: Class tasks are done in groups of 3-4 and Home tasks are individually



Equipment: **Equipment:** Smart Mobile phone with Camera for documenting and recording + sketchbooks for sketching and taking notes.

Exposures

Exposure 1: Basics of user studies - primary research and secondary research
Exposure 2: Basics of planning for conversations with users
Exposure 3: Basics of documentation methods
Exposure 4: How to do references and write acknowledgements

Design Thinking & Innovation Process involvement:

This task involves the following phase of the DT&I Process:

Phase 1. Observe/Empathise/Need Finding/Primary and Secondary Study and Research (Observation leading to Problem Identification)

Mapping SDG Goals: The following SDG goals need to be considered while solving this task. While documenting elements and expressions, do think of gender equality and reduced inequalities and concern for life on our planet.



Task 3:

Task 3 = 4.1 + 4.2 + 4.3 + 4.4 + 4.5

School Hours: 12, Home hours: 6



Task 3



Overall Task (Task 3.1 + Task 3.2 + Task 3.3):

Task Topic:

Waste in School environment

Investigate, document and prioritize **how all the waste generated in the school is disposed-off or converted into something useful**. The students work in groups of 2-3 and each group is allotted a different part of the problem space - users, places, products, communication methods, etc.

Task 3.1



Task 3.1:

School Hours: 2, Done in groups of 3-4 at School

Task Title:

Ask Questions:

1. Ask the following questions about the subject of waste disposal
What? Why? How? Whom? Where? When? etc.
2. How would you go about finding answers to the above questions?
3. Make a mind-map of the problem space – ‘Waste Disposal in your School’ with many branches and connections

Output 3.1: Mind-map of the topic ‘Waste Disposal in School’

Task 3.2



Task 3.2:

School Hours: 6, Done in groups of 3-4 at School

Task Title:

Primary Research:

The Primary research involves the following:

1. Identify all the users - primary and secondary users
2. Converse with the people involved with this activity to get a better understanding (take down notes), try to understand the activity from the user’s point of view (empathize with the user)
3. Identify all the places/environment where this happens and go to the place and investigate (document these),
4. Identify the objects that are involved and understand how it works (document these)
5. Identify the communication methods that are used to convey information (document these)
6. Document through photography or sketching the different aspects of the problem being solved
7. Collate all the information and order it according to priority/importance
8. Identify issues or problem areas that can be solved

Output 3.2: Make a summary presentation involving images and short text in form of a report or slides (around 6 to 10 pages or slides)

Task 3.3



Task 3.3:

Home hours: 6, Done individually at Home

Task Title:

Secondary Research:

Secondary research as the name indicates is collection of information from secondary resources. These could be from books, publications, newspapers, talking to experts and the internet. As someone else has written or spoken about the subject, you need to keep note down the reference details.

1. Analyze your topic into sub-topics and take-up one of these for further research and understanding. It could be based on the type of waste, how waste is converted to useful material, about its life-cycle, etc.
2. Search for information on a media that is accessible to you. Take down notes as points. Mark important aspects.

Output 3.3: Collate the information involving images and short text in form of a report or slides (around 6 to 10 pages or slides)

Task 3.4



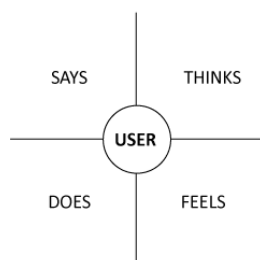
Task 3.4:

School hours: 4, Done in groups of 3-4 at School

Task Title:

Collating:

1. Collate all the information gathered from Primary and secondary research
2. Prioritise the different aspects that you discovered about the Waste Disposal according to their importance
3. Make an empathy Mapping (optional) according to user – Says, Thinks, Does, Feels



Output 3.4: Make a combined presentation of around 12 slides to explain your documentation along with the findings

- Add 2 more slides to describe the way forward in solving the problems connected to waste disposal at school.

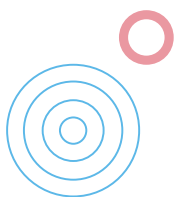
Reflection:



Questions to ponder:

- Which of these methods are you confident about using – Observation, Conversing, Documentation, Primary Research and Secondary Research?
- Will you use some of the methods to identify problems at home and in your neighbourhood?
- Will you share the methods of identifying problems with others?

Assessment:



Assessment Criteria (Task 3.1 + 3.2 + 3.3 + 3.4) - Assess yourself:

- The Mind-map was well done with several branches and connections (Group task 3.1)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Beginning</i>	<i>Developing</i>	<i>Promising</i>	<i>Proficient</i>	<i>Excellent</i>

- The presentation of the Summary points of the Primary Research was done well (Group task 3.2)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Beginning</i>	<i>Developing</i>	<i>Promising</i>	<i>Proficient</i>	<i>Excellent</i>

- The summary report/slides of the Secondary Research documentation was done well (Individual task 3.3)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Beginning</i>	<i>Developing</i>	<i>Promising</i>	<i>Proficient</i>	<i>Excellent</i>

- The collation/summary of the different stages of this module was presented well (Group task 3.4)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Beginning</i>	<i>Developing</i>	<i>Promising</i>	<i>Proficient</i>	<i>Excellent</i>

Other References:

Other suggested References:

1. Design Thinking Process - explained with an example:
<https://www.youtube.com/watch?v=uRtAzzitBmA>
2. Design Thinking Framework - a short video:
<https://www.youtube.com/watch?v=LhQWrHQwYTk>