Module: Architectural Design 3

115Z16B

Week 1

This first week's lecture is an introductory session of this module. We will be informed on how this semester's schedule looks like, some ground rules of the module (for facilitator and students), and a brief introduction of this area of study.

Photo by Jez Timms on Unsplash

▲ Real Gabinete Português de Leitura, Rio de Janeiro, Brazil Photograph: Massimo Listri/Taschen

# The world's most beautiful libraries – in pictures

In a new Taschen book, the Italian photographer Massimo Listri travels around the world to some of the oldest libraries, revealing a treasure trove of unique and imaginative architecture

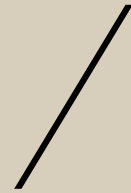● **'Spectacular' ancient public library discovered in Germany**

Wed 1 Aug 2018 07.00 BST

Stiftsbibliothek Admont, Admont, Austria

The world's most beautiful libraries – in pictures | Art and design | The Guardian
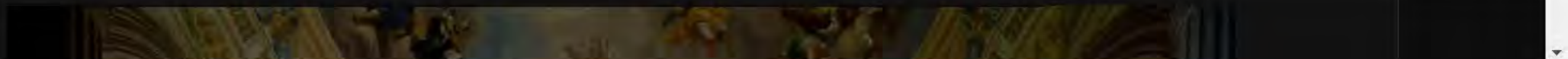
DR. MIA A. TEDJOSAPUTRO

FOUNDER AND CREATIVE DIRECTOR
AKSEN (CHINA – INDONESIA)
Est. 2001

Roles

Designer/ architect
Design researcher
Lecturer in Ningbo University
Lecturer in University of Nottingham Ningbo China
Enter(design)preneur

I am an expat in our beloved city, Ningbo China. I am an Indonesian architect, did my M Arch in Digital Architecture in 2011 and also holds a PhD degree (2018); both are from University of Nottingham UK. I completed my PGCHE, a British teaching qualification in Higher Education, in 2020. I will also be updating my own skills and knowledge through this module journey.

Welcome on board!

Research Interests

01

Study of design behaviour

02

AR/VR in Architecture

03

Bamboo architecture

04

Digital Design Cognition

05

Design Pedagogy

06

Embodied creativity

02

Mixed Reality in Architecture

+

03

Bamboo architecture

01

Study of design behaviour

The SCAMPER Method

S — Substitute
Replace a part of your product, service or process with another.

C — Combine
Combine ideas, processes or products into one more efficient output.

A — Adapt
Adapt an existing idea that might not have worked before to solve a problem.

M — Modify
Modify an aspect of your situation or problem, for example by magnifying or minifying them and see whether it gives you a new insight or whether it adds any value.

P — Put to another use
Put current processes or products that were intended for a specific purpose to another use to solve problems.
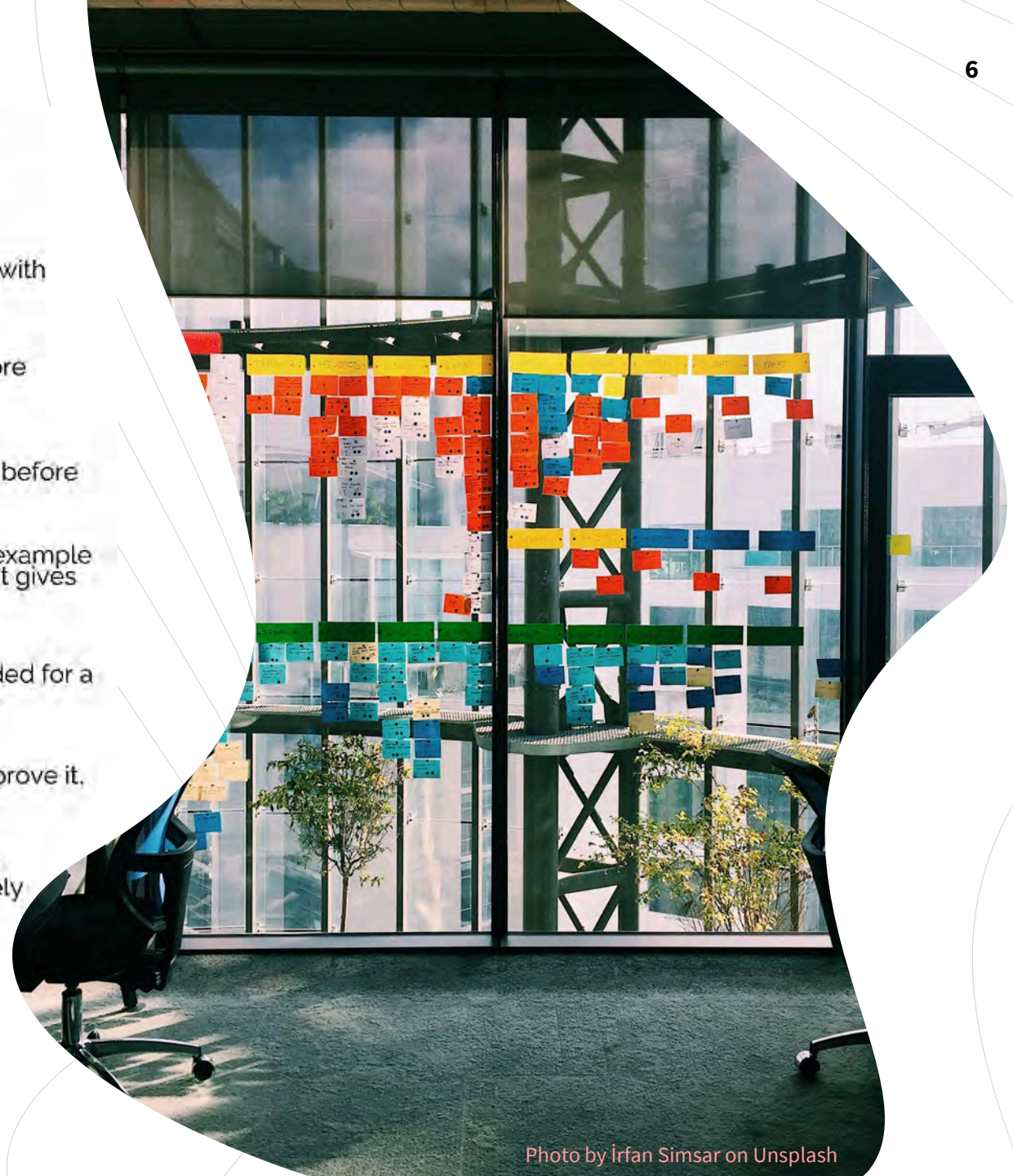
E — Eliminate
Eliminate or simplify a process or idea to get to improve it. but also to identify its most important aspect.

R — Reverse
Reverse the orientation or direction of a process or product, do things the other way around, completely against its original purpose.

FIN CHURCH

/

Fin has been trained in both landscape and architecture, studying the latter with Neil Spiller and Nick Clear and practices in both disciplines today as well as carrying out research. Interests regard emerging technologies and multi-functional integrated ecological, sustainable and social places in cities and villages.

Today session's aims and objectives

- To provide a clear outline of the Architectural Design 3 module (schedule, assessments, etc)
- To communicate ground rules
- To expand what to expect from this module
- To kickstart Week 1 by looking at relevant library precedents
- Collecting our library experience

Outline

Of Week 1's lecture

1 ABOUT THE MODULE

QUESTIONNAIRE

AIM AND OBJECTIVES

LEARNING OUTCOMES

(TENTATIVE) SCHEDULE

TUTORIAL FORMAT

ASSESSMENTS AND FEEDBACKS

STUDENT ENGAGEMENT AND REGISTRATION

GROUND RULES OF THE MODULE

ACCESS TO MATERIALS: MIRO BOARD, MIATEDJOSAPUTRO.COM

WHAT TO EXPECT

WHAT NOT TO EXPECT

Outline

Of Week 1's lecture

2 LIBRARY

THIS SEMESTER'S DESIGN BRIEF: A LIBRARY

DESIGN PRECEDENTS

HOW TO ANALYSE AND PRESENT DESIGN PRECEDENTS

Before you start..

Ningbo University:

Architectural Design 3

Either use the given link or scan this QR code
(open in your browser, NOT in WeChat)

1. Please make sure you have filled in the questionnaire
2. Please check that you have access the **website** (https://miatedjosaputro.com/category/nbu/design-studio/). Materials will be uploaded in this site only.
3. Password to access weekly page: **nbu-ad**
4. Make sure you have joined the **WeChat** group chat.
5. Please rename your aliases in **WeChat** and **DingTalk** to your real names

DingTalk group chats

Please join both chats

AD3 with Mia
3 of people

Scan the QR Code to Join the Group

AD3 with Fin
3 of people

Scan the QR Code to Join the Group

ABOUT THE MODULE

Building on previously accumulated design skills, this **17-week module** provides an opportunity to exercise a research informed design. The first half of the module is more structured with core topics, and the second half encourages learners to implement and to extend the depth and understanding of design issues.

Active learning is encouraged through scaffolded pedagogical strategies. The format is a combination of lectures, tutorials, student led discussions, peer reviews and potentially a site visit. Learner autonomy is strongly suggested, tutors act as facilitators rather than merely giving instructions.

Aims and objectives of module

#1

To equip students with necessary design skills

#2

To promote learner autonomy

#3

To promote a critical thinking and ownership of design through an individually defined design brief

#4

To guide students through the process of design by research

#5

To develop presentation and communication skills

Learning Outcomes

At the end of Semester 1, students should be able to do the following:

1. To apply previously learned theoretical knowledge (tectonics etc.) to a practical project

2. To analyse and re-evaluate design based on feedback and other peer input

3. To evaluate design based on previously developed design parameters

4. To create a final design based on iterative process of (demonstrable) improvements

5. To present the final design using taught presentation skills

Overarching skills

S1- Integrated design skills

Being able to critically make informed judgements on construction system, local building regulations, locally available building materials and other discussed aspects of design.

S2- Research skills

Designing through extensive research, from critically finding individual site to developing individual design brief based on what the community needs.
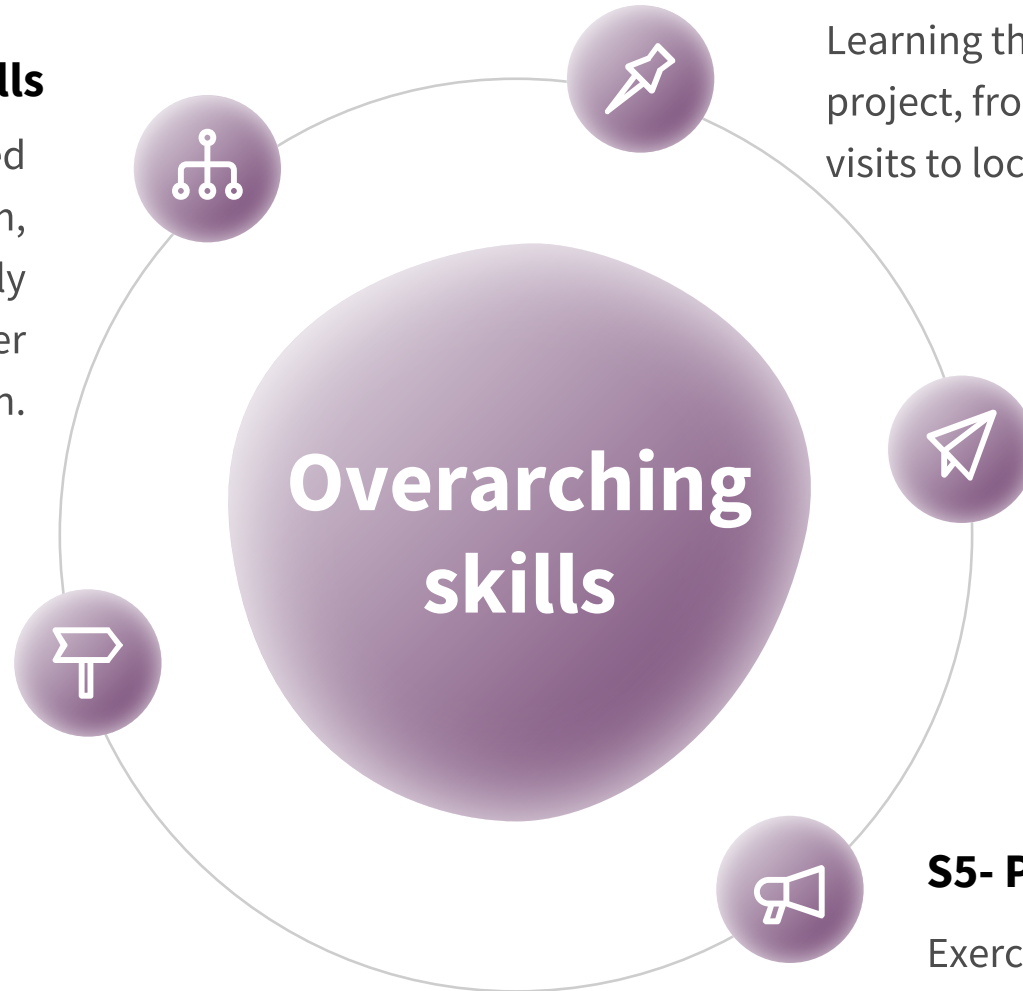
S3- Design precedents

Learning through analysis of completed project, from online sources and site visits to local libraries.

S4- Theory, history and current debate

Understand historical background of library design. Looking at design for community (public/academic/etc) and the role of library architecture.

S5- Presentation skills

Exercise model making skills, using digital and non-digital media for an effective idea presentation.

What is a library?

Library | Definition of Library by Merriam-Webster

: a place where books, magazines, and other materials (such as videos and musical recordings) are available for people to use or borrow.
: a room in a person's house where books are kept.
: a collection of similar things (such as books or recordings)

Eames House photo by Scott S. Warren.
Photo by Valdemaras D. on Unsplash

Stuttgart Library, photo by Mark Boss on Unsplash
New York Public Library, photo by Monika Kozub on Unsplash

TIANYI GE
NINGBO NEW LIBRARY

Given brief:
a library

- Area: 2000-2500sqm (±10%, *detailed calculation will have to be submitted in final submission*)
- Students to find individual sites and define own brief, through series of documented research
- Students to define own spatial requirements
- Students to conduct urban analysis and present arguments why a library is needed in a particular community.
- Students to decide which type of library
- A local site (*depending where you are currently*) is recommended although is not a must, as to give better understanding of user profile.
- We will also be looking at local building materials to increase awareness of what is available near the site.
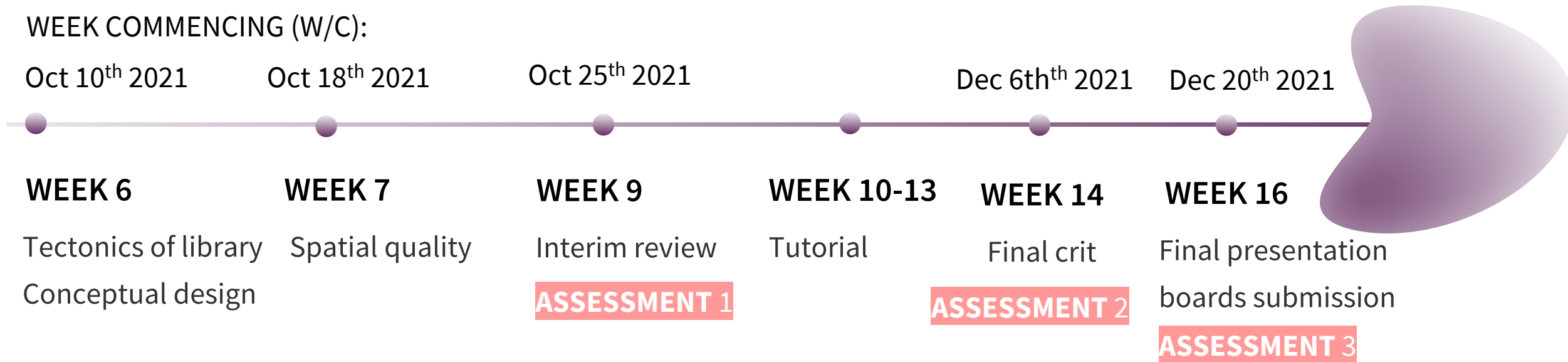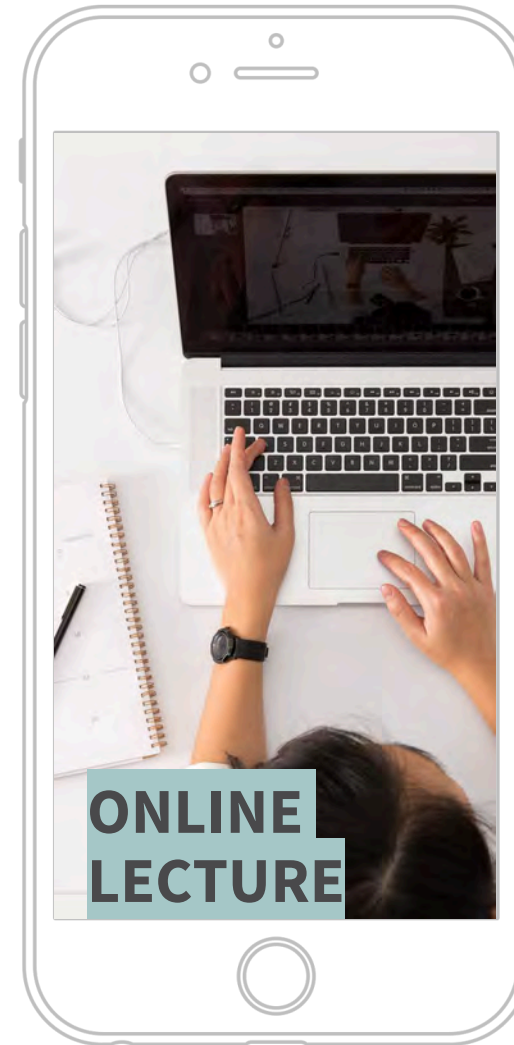
Module summary

WEEK 1-7

Introduction,
Choosing site,
Defining brief
Lectures

Reading week
WEEK 8

WEEK 9

Interim review

Progressive
exploration on holistic
design approach
WEEK 10-13

WEEK 14

Final crit

WEEK 15-16

Working
on presentation skills

Tutors feedback
Student feedback
Module feedback
WEEK 17

Module timeline

WEEK COMMENCING (W/C):

Sept 6th 2021   Sept 13th 2021

WEEK 1

Introduction

Typology of a library

WEEK 2

Site options

WEEK 3

Presentation:
chosen site

WEEK 4

Presentation:
Final design brief

WEEK 5

Circular economy
in architecture
User profile

Module timeline

WEEK COMMENCING (W/C):

| Oct 10th 2021 | Oct 18th 2021 | Oct 25th 2021 | | Dec 6th 2021 | Dec 20th 2021 |

WEEK 6

Tectonics of library
Conceptual design

WEEK 7

Spatial quality

WEEK 9

Interim review

ASSESSMENT 1

WEEK 10-13

Tutorial

WEEK 14

Final crit

ASSESSMENT 2

WEEK 16

Final presentation
boards submission

ASSESSMENT 3

Formats of
active learning

FLIPPED CLASSROOM APPROACH

(REMOTE) SITE VISIT

DOCUMENTED LEARNING AND RESEARCH ON MIRO BOARD

GUEST LECTURE(S)

ONLINE LECTURE

ONLINE TUTORIAL

Photo by Avel Chuklanov on Unsplash
Photo by Surface on Unsplash

Keeping a record of your weekly progress:

DOCUMENTED LEARNING AND RESEARCH ON MIRO BOARD

Note: We are running a trial on Miro Board, if it is deemed to be not as productive as expected, an alternative way of documentation will be explained in due time.

Labelled sketches (including Week number)
Notes
Reference images
Thoughts
etc

Lectures on Wednesday 1-2pm

on certain weeks
(see live schedule here:)
https://miatedjosaputro.com/2021/08/27/ad3-live-schedule/

Tutorial
scheduling
for every week

EACH STUDENT WILL HAVE TUTORIALS WITH BOTH MIA AND FIN

ONLINE LECTURE

ONLINE TUTORIAL

Photo by Avel Chuklanov on Unsplash
Photo by Surface on Unsplash
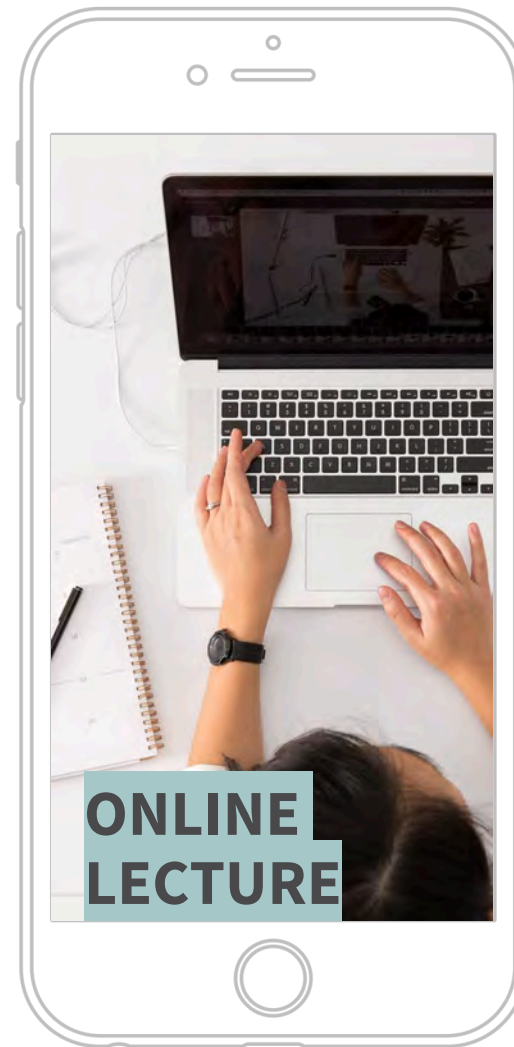
Assessment and feedback
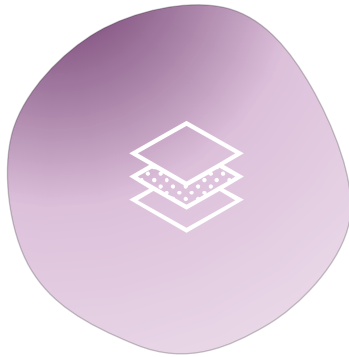
Assessment 1: Interim Review

Week 9

20%

Assessment 2: Final crit

Week 14

40%
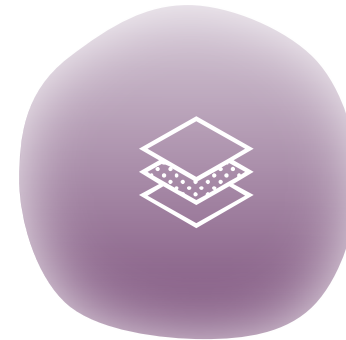
Assessment 3: Presentation Boards

Week 16

20%

Attendance counts

Week 1-17

20%

Student engagement and registration
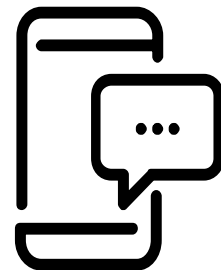
Attendance is only calculated once a week, the condition is satisfied <u>only</u> when you are:

- **Presence during tutorial with both with Mia and Fin** *(webcam has to be turned on)*

- **Presence during lectures, if there is one during the week***(webcam has to be turned on during all interaction times)* .

- **Miro Board weekly archiving**

Please note that recorded lectures will not be made available.

Ground rules

Any disabilities and **difficulties** have to be declared before the beginning of Week 2 class.

Plagiarism is a big issue, please put **image sources** at all times.

If you have to **miss a class** *(or unable to engage in forum in online environment)* due to extenuating circumstances let us know before the class. Evidence is needed.

Respect your peers whilst engaging in (online or offline) discussions, or any online or offline correspondence. Keep it concise.

Mia and Fin are here to facilitate your learning, you are in charge of your own learning. if you have any learning problems however, kindly notify one of us.

Preferred academic writing style: ==Harvard== referencing style

Download the guide from this link or use *Google Scholar* to generate reference list
https://miatedjosaputro.com/2021/02/27/week-1/

IN-TEXT CITATION
Author (Year) or (Author, Year)
Example:
"After that I lived like a young rajah in all the capitals of Europe…" (Fitzgerald, 2004).
or
Fitzgerald (2004) posits that he lived like a young rajah in the capitals of Europe..

REFERENCE LIST
Author (Year).
Example:
Fitzgerald, F. (2004). The great Gatsby. New York: Scribner.

(Virtual) office hour

During this online learning environment, we will be happy to received your concern anytime in the day (but be sensible). Preferred method of communication:

Email

MIA@MIATEDJOSAPUTRO.COM
FIN.CHURCH@LIVE.CO.UK

PLEASE SIGN OFF WITH
YOUR NAME+MODULE+STUDENT ID

Group chat

ON WECHAT, IF YOUR CONCERN
MIGHT BENEFIT YOUR PEERS

Teaching materials

Download from this link :

https://miatedjosaputro.com/category/nbu/design-studio/
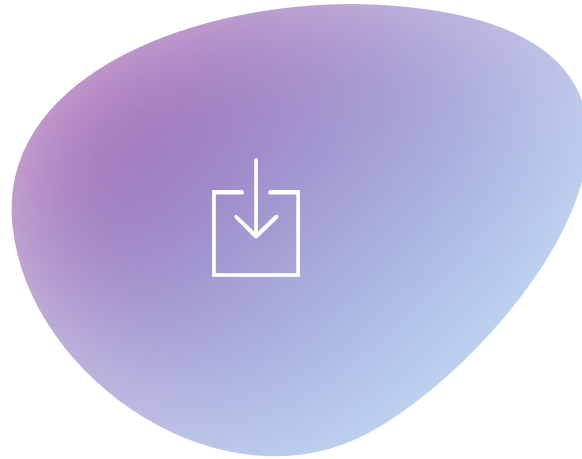
Password: nbu-ad

MIRO Board

The MIRO Board link can be found here:

I will also send an email to each one of you to be able to access Miro

NBU Y3 Studio, Online Whiteboard for Visual Collaboration (miro.com)

or

https://miro.com/app/board/o9J_l0yhr30=/

10 minutes activity:

Please put your short bio, pictures, past projects or your interests on Miro Board

What to expect from this module

Apart from the listed aims and objective,

1. You will exercise your independent learning skills.
2. You will be more critical on analysing case studies, theories, methods, etc.
3. You will be able to exercise the notion of "design by research".
4. You will be able to do your own further learning and research based on the provided materials.

Recommended reading list

Dewe, M. (2016). *Planning public library buildings: Concepts and issues for the librarian*, Routledge.

Edwards, B. (2009). *Libraries and learning resource centres*, Routledge.

Freeman, G. T., Bennett, S., Demas, S., Frischer, B., Peterson, C. A. & Oliver, K. B. (2005). *Library as Place: Rethinking Roles, Rethinking Space. CLIR Publication No. 129*, ERIC.

Lushington, N., Rudorf, W. & Wong, L. (2016). *Libraries: a design manual*, Birkhäuser.

McCabe, G. B. & Kennedy, J. R. (2003). *Planning the modern public library building*, Libraries Unlimited.

Miersch-Süß, I. (ed.) (2021). *Libraries and Their Architecture in the 21st Century,* Berlin/Boston: De Gruyter Saur.

Sannwald, W. W. (2009). *Checklist of library building design considerations*, American Library Association.

Worpole, K. (2013). *Contemporary library architecture: a planning and design guide*, Routledge.

2
LIBRARY
DESIGN PRECEDENTS

A <mark>quiz</mark> about library

From a user perspective: **List what makes a great library experience in keywords. What makes an ideal library?**

Re-iterated brief:
Focuses for
design precedents analysis (the highlighted). *Just a suggestion..*

- Area: 2000-2500sqm (±10%, *detailed calculation will have to be submitted in final submission*)
- Students to find individual sites and define own brief, through series of documented research
- Students to define own spatial requirements
- Students to conduct urban analysis and present arguments why a library is needed in a particular community.
- Students to decide which type of library
- A local site (*depending where you are currently*) is recommended although is not a must, as to give better understanding of user profile.
- We will also be looking at local building materials to increase awareness of what is available near the site.

Library classification

4 major types of libraries:
1. **Academic libraries:** serve colleges and universities
2. **Public libraries:** serve cities and towns of all types
3. **School libraries:** serve students from kindergarten
4. **Special libraries** are in specialised environments, such as hospitals, corporations, museums, the military, private business and the government.

Types of Libraries - Books & Bytes: Librarians as Information Managers - LibGuides at Cornell University

Another quiz:

What are design considerations on designing a library?

You can upvote and downvote your classmates' answers too

What is a design precedent? How do we use it?

How do we analyse it? How do we present it?

https://youtu.be/8tOajPhR5P4

Architecture Precedent Study 101 - A Guide (firstinarchitecture.co.uk)

Clark, R. H. & Pause, M. (2012). *Precedents in architecture: analytic diagrams, formative ideas, and partis*, John Wiley & Sons.

What is a design precedent?
How do we use it?

A precedent is..
"something done or said that may serve as an example or rule to authorize or justify a subsequent act of the same or an analogous kind"
Merriam Webster dictionary

- Inspiration
- Design concept generation
- Justification
- Explanation and communication

Precedent Study Guide - archisoup | Architecture Guides & Resources

The drawbacks

- Precedents are primarily used in judicial system.
- In legal system: we are obliged to make similar decisions based on similar circumstances → <u>not so in architecture</u>
- Using precedents in architecture is counterproductive to creativity.
- System of references **(more fragmented)** is a more productive way in comparison to system of precedents **(more holistic).**

Goldschmidt, G. (1998). Creative architectural design: reference versus precedence. *Journal of Architectural and Planning Research*, 258-270.

Key Concepts for Architects: Precedents - The University of Sheffield Kaltura Digital Media Hub

How do we analyse it?
How do we present it?

1 *Criterion* based: assessing things based on criteria

2 Basing hypotheses on **evidence**

3 *Concession rebuttal* (assessing both sides of arguments to be objective)

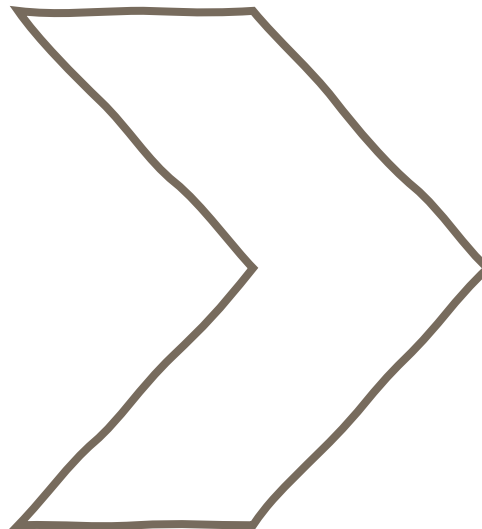*Evidence based* thinking based on the three above-mentioned points

Photo by Diego PH on Unsplash

CRITICAL THINKING
IN DESIGN

How we can incorporate to our design process:

(1) *Criterion*

(2) *Evidence*

(3) *Concession rebuttal*

Design criterion
For example: principles of design, function, structure, or design problems designers set themselves

Design precedents
For example: presenting evidence through past projects with similar design problems, initial models, etc

Advantages and disadvantages
Analyse and evaluate both sides of arguments of each design criterion.

Suggestions

1. Reading list → choose one or two references
2. Develop your own **list of library (architectural) characteristics** based on your reading. This list is your criteria
3. Search for completed library projects (they are your *evidence)* and analyse (*concession rebuttal*) based on your list. Bear in mind the **given brief**.
4. Present your analysis *(not just stating the facts, we can read facts online. We want your opinions)* and key takeaways

Week 1 presentation

Friday, Sept 10th

10 minutes per student using Miro Board

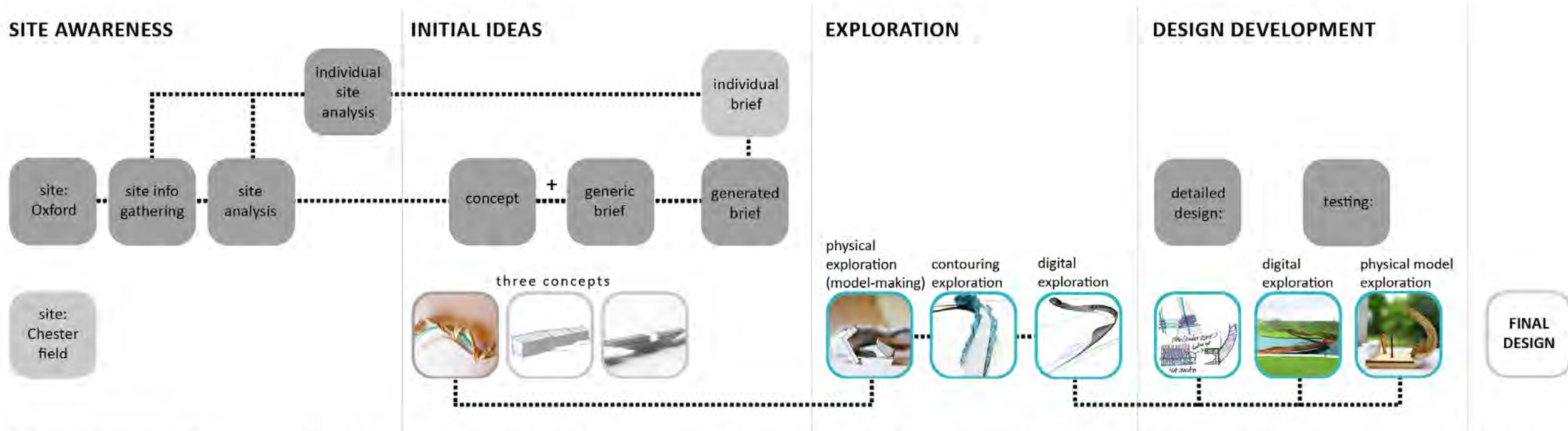**Note: presentation materials should be uploaded on Miro before 12:30pm**
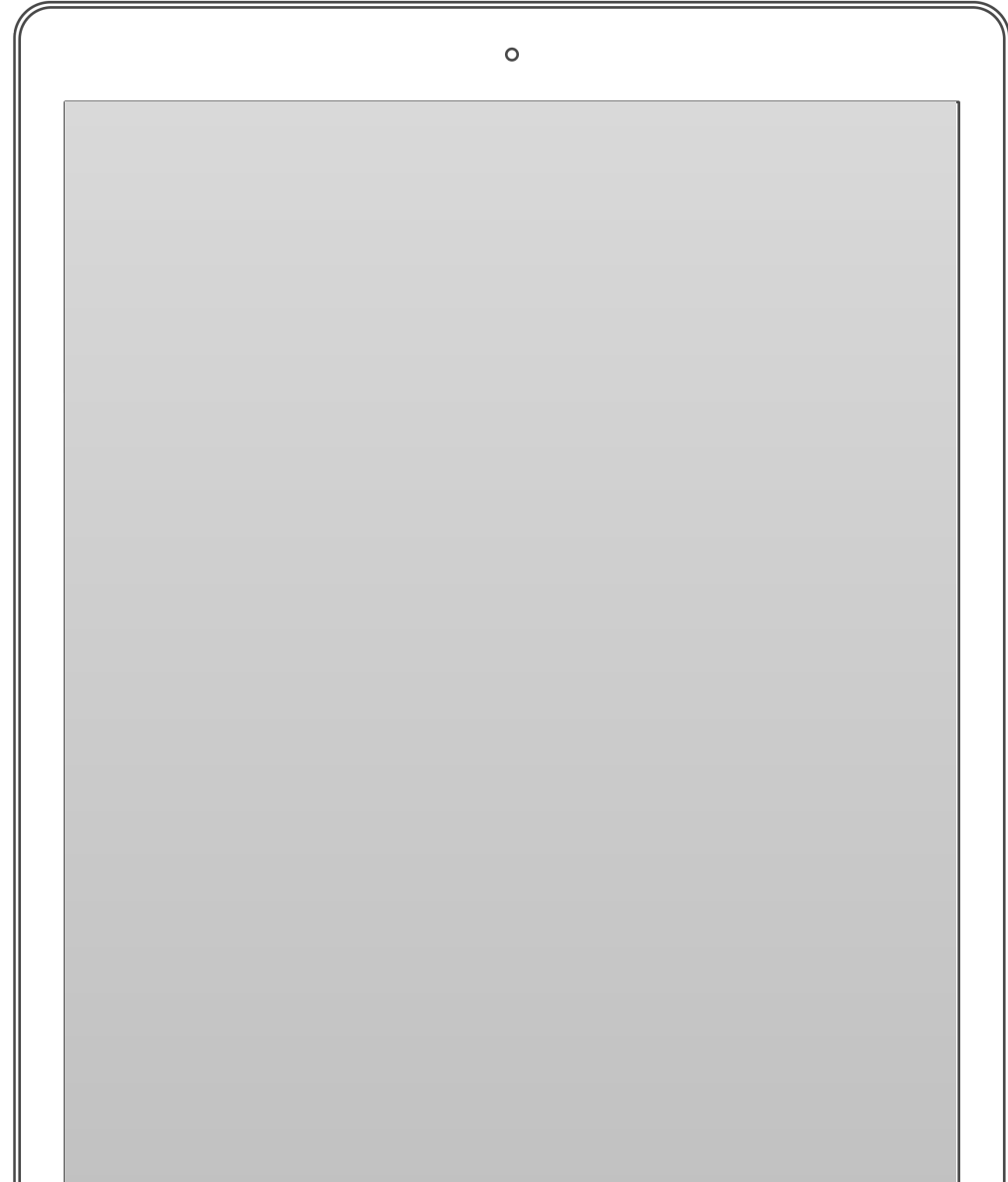
Miro Board:

Drag and drop images and add your write-up. Don't spend time on doing any PS/AI layout-ing.

State only necessary facts, what we are interested in is <mark>your analysis</mark>.

Minimum <mark>2 design precedents</mark>.

Keep it snappy and relevant. You only have 10 minutes.

Archiving your design process from Week 1

Pedestrian and Cyclists
Bridge, Oxford
design framework
Master of Architecture Project (Second Term)

SITE AWARENESS

individual site analysis

site: Oxford → site info gathering → site analysis

site: Chester field

INITIAL IDEAS

individual brief

concept + generic brief ·····> generated brief

three concepts

EXPLORATION

physical exploration (model-making) ····· contouring exploration ····· digital exploration

DESIGN DEVELOPMENT

detailed design: testing:

digital exploration   physical model exploration

FINAL DESIGN

REFLECTIVE STATEMENT. the project initially started with a set of group generic brief. next, personal brief was shaped in a few weeks time, concurrently with the first interim review. during the review, we came out with three design alternatives. at this stage, i prefer to go for physical techniques using models to started off. after one desired design was chosen, again, i had an opportunity to play with physical model (contouring exploration using perspex). my view was broaden, i began to understand what was the real problem of my bridge. after that, i began to start doing a digital exploration and started all over again and refer back to my own brief. digital tool (Rhino) is an aid to shape the form and explore design, by the ability to visualise the whole bridge from inside and outside and even it was mixed with hand sketches. my digital skill was slightly improved, but yet, in terms of speed, further exploration is needed. after the second review, ideas were compiled and series of tests are significant to gain more critical decisions and detailed design. physical models, digital model s and 3d visualisations are the main tools. to be regretted, this term i did not have the chance to use 3d printer due to some unexpected errors.
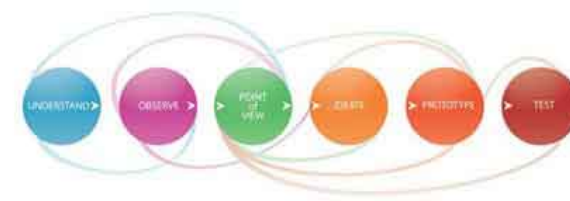
Mia Tedjosaputro's M.Arch exploration
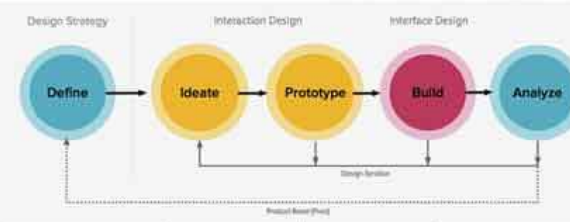
DESIGN PROCESS MODELS

Photo by Diego PH on Unsplash

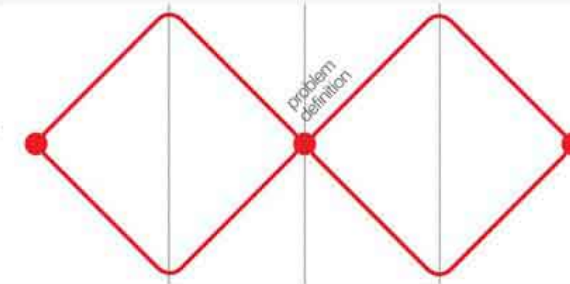Why Design Thinking Doesn't Work (designorate.com)

Stanford D.School Design Thinking
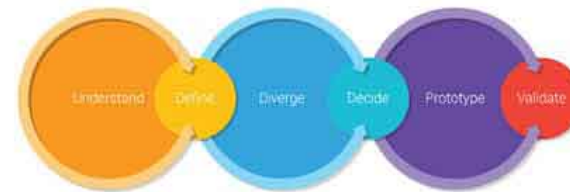
Zurb design thinking Model

The Double Diamond Diagram by the Design Council

IBM Design Thinking Model

The Google Design Sprint Process
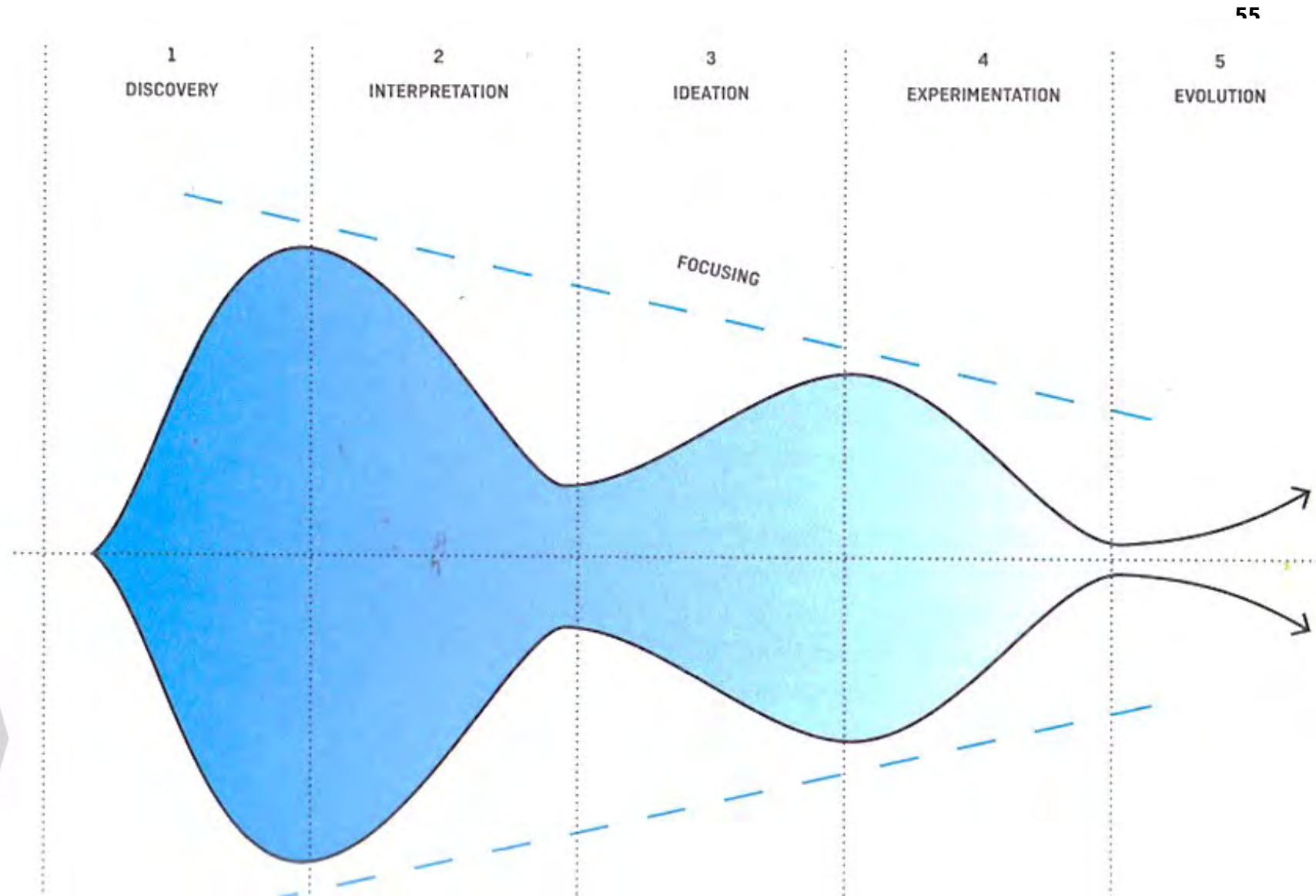
IDEO Human-Centered Design Model

DESIGN THINKING

Popularised by Tim Brown, CEO of IDEO.

It promotes human-centred approach. It relies on empathy.

Design Thinking – IDEO U

| | 1 DISCOVERY | 2 INTERPRETATION | 3 IDEATION | 4 EXPERIMENTATION | 5 EVOLUTION |

FOCUSING

NUMBER OF IDEAS

FRAME A QUESTION | GATHER INSPIRATION | GENERATE IDEAS | MAKE IDEAS TANGIBLE | TEST TO LEARN | SHARE THE STORY

Makstutis, G. (2018). *Design process in architecture: From concept to completion*. Laurence King.

DESIGN THINKING

Popularised by Tim Brown, CEO of IDEO.

It promotes human-centred approach. It relies on empathy.

Design Thinking – IDEO U

THE PROCESS OF DESIGN SQUIGGLE

By Damien Newman

The Process of Design Squiggle by Damien Newman, thedesignsquiggle.com

Noise / Uncertainty / Patterns / Insights

Clarity / Focus

Research & Synthesis
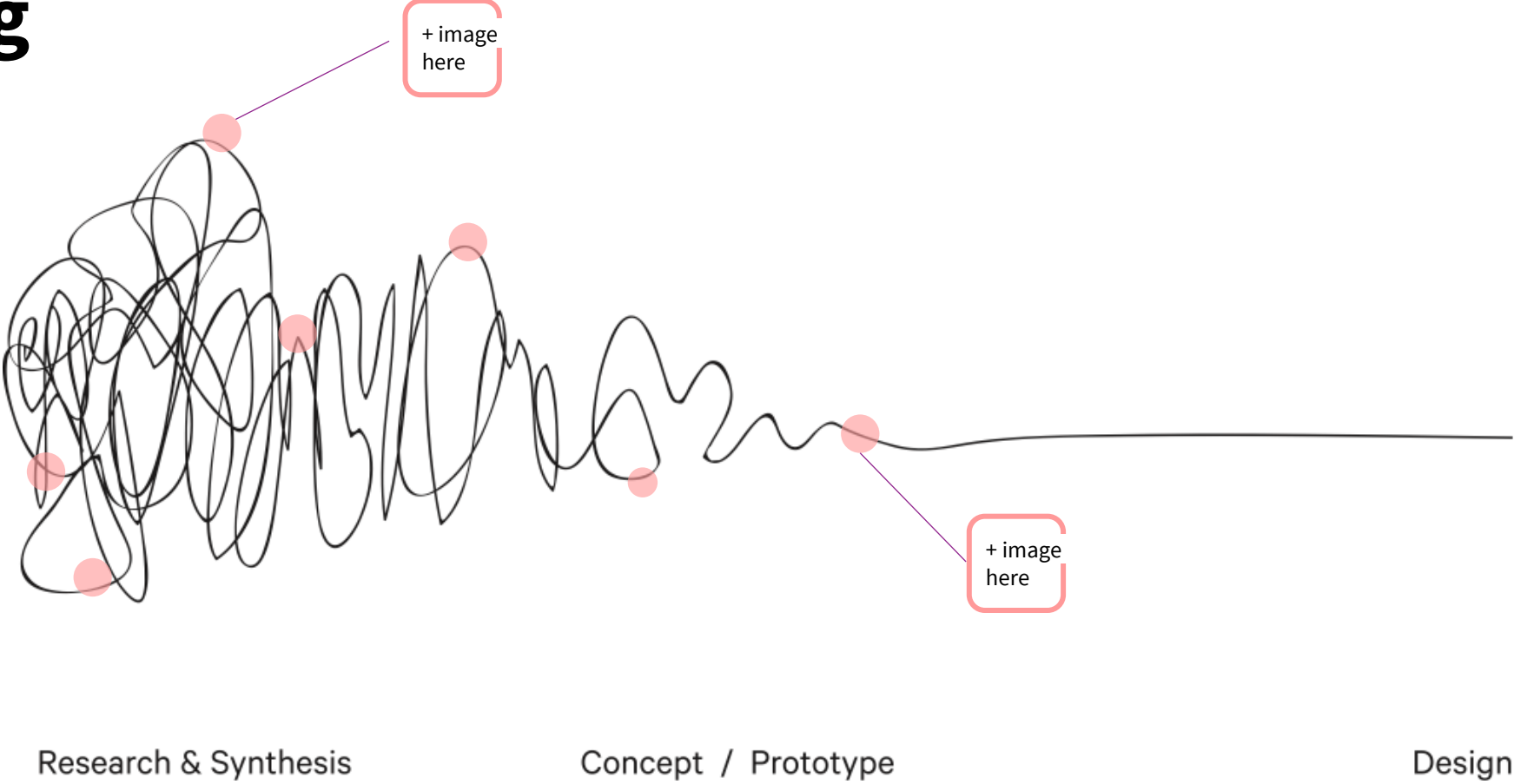
Concept / Prototype

Design

Documenting your design process

And present them as part of your final submission by identifying and mapping the progress

Noise / Uncertainty / Patterns / Insights

Clarity / Focus

+ image here

+ image here

Research & Synthesis

Concept / Prototype

Design

3
FOR WEEK 2:
Start thinking about 2
site options

Over to Fin..