Design Thinking for Education

UNESCO - RDTC SEMINAR - SOUTH CHINA NORMAL UNIVERSITY
Learning and innovation culture in schools
HUMAN-CENTERED DESIGN FOR SCHOOL INNOVATION:
Project-based, context-relevant workshops for teachers to learn and try the fundamental mindsets of human-centered design
TEACHERS TEACHING TEACHERS: Unconference format for educators that promote peer and informal learning
OPEN LAB SERIES:
Interdisciplinary experiments on teacher professional development
10 Open Labs to date!
Frontal lobe
Executive functions, thinking, planning, organizing, and problem solving, emotions and behavioral control, personality

Motor cortex
Movement

Sensory cortex
Sensations

Parietal lobe
Perception, making sense of the world, arithmetic, spelling

Occipital lobe
Vision

Temporal lobe
Memory, understanding, language
KINDERHABI:
Professional development programs for early childhood educators
MANGHAHABI PROGRAM:
Long-term partnership with innovation and research teams inside schools
LAB RESEARCH PROJECTS:
Self-organized projects in collaboration with schools, government agencies, and other organisations
<table>
<thead>
<tr>
<th>Sub-area</th>
<th>ALL RESPONSES</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>INV</td>
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<td>0.02</td>
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<tr>
<td>Growth &amp; development</td>
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<td>Leadership</td>
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<td>Leadership</td>
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For today

• Introduction to the Design Thinking Framework
• Go through the first step by discussing and experiencing core design thinking methods
• Adapt the methods to look for problems and prototype solutions for users
DESIGN THINKING
An Overview

DESIGN BRIEF
identify

improve

invent

SOLUTION
Welcome to Design Thinking
RUSH CHALLENGE
Design the perfect wallet
Know your partner’s needs/problems when travelling. Ask questions and listen.

2 MINUTES FOR EACH INTERVIEW ROUND
“What do you want?”
“If I had asked people what they wanted, they would have said faster horses”

-Henry Ford
“What do you want?”
Why do you want that? How does that make you feel?
For the second round, ask "why?"

2 MINUTES FOR EACH INTERVIEW ROUND
Summarize your notes into needs and values.
"designing shoes"

<table>
<thead>
<tr>
<th>What my partner needs</th>
<th>What my partner values</th>
</tr>
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<tbody>
<tr>
<td>I walk from home to school, so I need sturdy shoes for outdoor and indoor use</td>
<td>durability</td>
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<tr>
<td>I need shoes that can prevent me from injuring myself, I'm very clumsy</td>
<td>functionality</td>
</tr>
<tr>
<td>Because I'm very fickle minded, I need shoes that can change looks and match most of my clothes</td>
<td>comfort</td>
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<td>safety</td>
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<td>support</td>
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<td>flexibility</td>
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<td></td>
<td>aesthetics</td>
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<td></td>
<td>individuality</td>
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Create a challenge statement for your user.

3 MINUTES
What my partner needs

I walk from home to school, so I need sturdy shoes for outdoor and indoor use.

I need shoes that can prevent me from injuring myself, I'm very clumsy.

Because I'm very fickle minded, I need shoes that can change looks and match most of my clothes.

What my partner values

durability
functionality
comfort
safety
support
flexibility
aesthetics
individuality
My partner, who thinks that safety and comfort are important, needs shoes that will effectively prevent injuries.
My partner, who thinks that values are important, needs needs values.
Sketch 5 radical ideas to meet your partner’s needs.

5 MINUTES
Show your ideas and gather feedback.

3 MINUTES
Reflect on the feedback. Sketch a new solution.

2 MINUTES
Build your solution.

6 MINUTES
Test your prototypes and get feedback.

4 MINUTES
Discussion
Typical Problem Solving
Design Thinking
Empathy for users
Collaborative ideas
Rapid prototyping
We are all designers
design = intention + action
An approach to identifying and solving problems
Not new!
HIMAYIN ANG PROBLEMA

AMBAGAN NG MGA IDEYA

IPAKITA, SURIIN, AT AYUSIN

BUMUO NG PROTOTYPE
An Overview

- Identify
- Improve
- Invent
- Solution
Identify
Invent
Improve
Travel Lite
Your Travel Docs Generator

Title of Seminar
Inclusive Dates of Travel
Companions: Teacher(s)
Staff
Student(s)

Note: This document will automatically compute the estimated budget.

Preview Document
Generate Document
Identify
USER RESEARCH, FIELDWORK, ANALYSIS, CONTEXT
Problem-solving is overrated. Problem finding is more important.
Let’s start with a user
Who are they? How do they consume media and ICT?
Pick a challenge

5 MINUTES
Safe, Effective, and Responsible ICT Use
Knowledge Map + Empathy Map

20 MINUTES
THINK AND FEEL

HEAR

SEE

SAY AND DO

PAIN | GAIN
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<th>About the main users</th>
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<td><strong>What do we think we know?</strong></td>
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<td><strong>What do we want to know?</strong></td>
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<tr>
<td><strong>Who do we need to talk to or observe?</strong></td>
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<tr>
<td><strong>Where should we go to find our informants? When should we talk to or observe them?</strong></td>
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Organize your team’s research using both tools

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Experience Journeys

30 MINUTES
A diagram that explores the multiple (sometimes invisible) steps taken by users as their engagement with the product or service evolves.

FABRICIO TEIXEIRA
EXPERIENCE DESIGN DIRECTOR, R/GA NY
Step 1: Identify the stages

STEP-BY-STEP EXPERIENCE OF THE USER
Sample: Purchasing Shoes

EXPLORE  COMPARE  TRY OUT  PURCHASE  USE
Step 2: Understand user goals

QUESTIONS, DECISIONS, THOUGHTS, CONSIDERATIONS
Purchasing Shoes

**EXPLORE**
- What do I need?
- What brands have I used that I like?
- What shoes are the trendiest?
- When do I need the shoes?

**COMPARE**
- What do I like?
- Which one is the best?
- Which shoes fit within my budget?
- What do people say about these shoes?

**TRY OUT**
- Are these comfortable?
- What outfits will fit these?
- Do I like how it looks?

**PURCHASE**
- Are these worth the price?
- How will I pay?
- Am I sure that these are the shoes I want?

**USE**
- Am I happy with my purchase?
- Do people compliment my shoes?
- Are they still comfortable?

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**Goal:** Find prospective brands and shoes to plan shoe shopping.

**Goal:** Look at available shoes that fit my preference and needs.

**Goal:** Physically check out which shoes fit the best.

**Goal:** Gain peace of mind in paying money for a product.

**Goal:** Be satisfied with shoes and brand.
Step 3: Identify touchpoints

INTERACTIONS BETWEEN USER AND PRODUCT/SERVICE
Purchasing Shoes

**EXPLORE**
- **Goal:** Find prospective brands and shoes to plan shoe shopping.
- **Touchpoints:**
  - social media
  - websites
  - blogs
  - word of mouth
  - television shows
  - movies
  - ads
  - online videos

**COMPARE**
- **Goal:** Look at available shoes that fit my preference and needs.
- **Touchpoints:**
  - window displays
  - review sites
  - magazines
  - social recomm's

**TRY OUT**
- **Goal:** Physically check out which shoes fit the best.
- **Touchpoints:**
  - shoe stores
  - department stores
  - friends' shoes

**PURCHASE**
- **Goal:** Gain peace of mind in paying money for a product.
- **Touchpoints:**
  - cashier
  - online merchant

**USE**
- **Goal:** Be satisfied with shoes and brand.
- **Touchpoints:**
  - online reviews
Create a User Journey in selecting a restaurant to eat in
Step 1: Identify the stages

STEP-BY-STEP EXPERIENCE OF THE USER
Step 2: Understand user goals

QUESTIONS, DECISIONS, THOUGHTS, CONSIDERATIONS
Step 3: Identify touchpoints

INTERACTIONS BETWEEN USER AND PRODUCT/SERVICE
Create a User Journey for your selected persona
Step 1: Identify the stages of how the user experiences the problem
Step 2: Understand user goals

QUESTIONS, DECISIONS, THOUGHTS, CONSIDERATIONS
Step 3: Identify touchpoints

INTERACTIONS BETWEEN USER AND PRODUCT/SERVICE
How to IDENTIFY?

• Share what you know
• Learn from users
• Consult experts
• Understand the context
• Interpret learnings
Invent
BRAINSTORMING, COLLABORATION, PROTOTYPING
Categories +
Introducing Brainstorming

15 MINUTES
Capital cities of the world
Excuses why students don’t have homework

2 MINUTES
There’s no single expert in the group
Ideas come in waves
Your “bad” ideas might inspire good ideas
3 Thinking Hats

15 MINUTES
| CHALLENGE/PROBLEM | increase the good (+) | remove the bad (-) | use unexpected resources (!) |
Main idea

Sketch/explanation of what it looks like in real life
Processing
Exit Tickets

5 MINUTES
What did I learn today?
How did I learn this?
How do I feel about it?
What unanswered questions do I still have?