LEARNING for CHANGE AND INNOVATION

WORLD CONGRESS
7-9 NOVEMBER 2016 ADELAIDE, SOUTH AUSTRALIA

CONGRESS SUPPORTERS
Safe failing: Cross-discipline simulation across built environment disciplines

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This session...
• Safe failing: stakeholders mindsets
• Safe failing: experiential, design, wicked problem
• Application
• Debrief: habits and draft picks
• Capstone
• Considering learning
SAFE FAILING

• Stakeholders
  • University (assessment)
  • Students
  • Industry
• Facilitating safe failing – little/no consequences, practice industry, facilitates ideation.
• Creating a safe environment to experience an iterative generative process.
• Learn to take the ‘best fail’ forward – developed in a creative, enjoyable atmosphere.
• Experiential learning circle (Coghlan and Brannick, 2005) – turning self-awareness and sensitivity into meta-learning and knowledge.

Integrated work practice key to raising employability (Myklebust 2016) ...
...co-operative education model – academic studies with integrated periods of practice in working life -
• approach (ideo, & d.School Stanford).
DESIGN THINKING

PHASES

1. DISCOVERY
   - I have a challenge. How do I approach it?

2. INTERPRETATION
   - I learned something. How do I interpret it?

3. IDEATION
   - I see an opportunity. What do I create?

4. EXPERIMENTATION
   - I have an idea. How do I build it?

5. EVOLUTION
   - I tried something new. How do I evolve it?

STEPS

1-1 Understand the Challenge
1-2 Prepare Research
1-3 Gather Inspiration

2-1 Tell Stories
2-2 Search for Meaning
2-3 Frame Opportunities

3-1 Generate Ideas
3-2 Refine Ideas

4-1 Make Prototypes
4-1 Get Feedback

5-1 Track Learnings
5-2 Move Forward

The Design Thinking process oscillates between divergent and convergent thinking modes. It can be helpful to be aware of the mode that corresponds to the design phase you are working through.
A problem that seems difficult or impossible to solve.

Common characteristics:
- incomplete or contradictory data or requirements around the problem
- connected to, and impact other problems
- no single satisfactory answer to the problem OR
- the obvious answer is not the answer you want.

As is often the case with research, the most important step towards solving the problem is framing the most accurate (right) problem statement accepted by stakeholders.
e.g. MAPPING

**CIRCLE MAP**
Defining in Context

How are you defining ideas? What is the context? What is your frame of reference?

**BRACE MAP**
Part-Whole

What are the component parts and subparts of this idea as a whole?

**FLOW MAP**
Sequencing

What is the sequence of the idea? What are the sub-stages?

**MULTI-FLOW MAP**
Cause and Effect

What are the causes and effects of this idea? What might happen next?

**BRIDGE MAP**
Seeing Analogies

What is the analogy being used? What is the guiding metaphor?

**BBUBBLE MAP**
Describing Qualities

How are you describing this idea? Which adjectives would best describe this idea?

**DOUBLE BUBBLE MAP**
Compare and Contrast

What are the core ideas, supporting ideas, and details in this information?

**TREE MAP**
Classification

What are the core ideas, supporting ideas, and details in this information?
Cameras (or not)

ACTION

Debrief

Adapted from Do, K. NGLS
WHAT WE ARE HOPING FOR

Instilling HABITS of the...

01 Mind (thinking)

02 Action (doing)

03 Communication (approach)

04 Models (process)

activities

play & recreation

learning landscapes

learning reflectively

learning by ideation

learning by dialogue
Consortium members
- Academics
- Students (UG & PG)
- Accreditors
- Architects (A & IA)
- Planners
- Builders
- Community
- Government

Adapted from Do, K. NGLS
The effectiveness of the Next Generation Technology

**03 TECHNOLOGY**

+ Connectivity
+ Time
+ Mobility & Access
+ Integration
+ Learning experience
+ Ubiquitous

**DEVELOPMENT**

"Tool-kits"

- implements
- apparatus
- tacit

"Devices & gadgets"

- storage devices
- information portals
- virtual applications
- net-work

Adapted from Do, K. NGLS
02 SPACE
+ Physical dimension
+ Foreground & background
+ Support learning interactions
+ Learning experience

SHIFTS

"Volumes"
- structured
- hierarchical
- focussed
- convergence
- raised

"Environments"
- less-structured
- convergence
- level playing field
- multi-focussed
- points of convergence

Experience??

Adapted from Do, K. NGLS
Adapted from Do, K. NGLS Experience ‘SPACE’ Project environment Interactive dynamics

Is knowledge the only currency traded in this space?

What does the space support?

What does the space look like?

What does the space feel like?

IMAGE of the Experience ‘SPACE’
• Points of difference

1. Ability to reflect on unfinished work
2. Ability to participate in something you are not good at
3. Ability to take on problems that don’t have a clear answer (wicked problems)
4. Sharing expertise and finding innovation in the spaces between expertise
5. Collaborate without ‘bigfooting’
6. Bring out the potential creativity and innovativeness in people

Adapted from Do, K. NGLS
• Takeaways

1. Don't ignore emotions/feelings/intuition
2. Go for early fails (prototyping)
3. Visualisation is a tool (diagramming); don’t just rely on words
4. Look for insights, not solutions
5. The stated problem may not be THE problem
6. Don't be afraid of the unknown
7. Look for ways to collaborate
8. Don't solve the problem, just move forward
9. Solve for yourself

Adapted from Do, K. NGLS
A CAPSTONE COMPLEMENTING CURTIN’s

- work integrated (applied) learning.

<table>
<thead>
<tr>
<th>Fieldwork</th>
<th>WIL</th>
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<tbody>
<tr>
<td>Practical component, required as integral part of the course, conducted outside the normal University setting</td>
<td>includes work placements, fieldwork, industry-based projects, case studies, simulations, virtual simulations, reflective journals, problem-based learning, mentoring from industry partners, work-related presentations, role plays, laboratories and capstone subjects</td>
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= Your Curtin degree + industry experience

### Curricular & co-curricular
- Assessment

### Intensity & Focus
- Frequency
- Duration
- Industry partner

Adapted from Do, K. NGLS
• Capturing of work integrated (applied) learning.

<table>
<thead>
<tr>
<th>Explore</th>
<th>Apply</th>
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<tbody>
<tr>
<td>Evidenced – low intensity, no assessment</td>
<td>Developed – focussed, some assessment</td>
</tr>
<tr>
<td>Highly Developed</td>
<td></td>
</tr>
<tr>
<td>(Placement, Internship, Simulation)</td>
<td>full credit</td>
</tr>
<tr>
<td>Absent</td>
<td>Ignorant</td>
</tr>
<tr>
<td>Theoretical and/or introductory content</td>
<td>Not evidenced</td>
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A CAPSTONE COMPLEMENTING SOBE’s

- Sanditechture (1st yr)
- Resignification
- Studio (continuous)
- Themed Constructions (3rd yr)
Resignification
Themed construction
• THANK YOU