Design Thinking as Transformative Educational Practice

Goldsmiths, University of London - Jennifer Bain & Juliet Sprake
Miriam College - Edizon Fermin
Working with **UNCERTAINTY** is our new normal state.

Rebecca Davis (2013) Aberystwyth University, UK
Beginning with CRAZY ideas
Seeking help from others
Making the CRAZY idea work
Transforming connected lives
[We] need to mutate or face potential natural selection and/or extinction.
Are you ready?
Design thinking can help us.
<table>
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<tr>
<th>Time</th>
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| 14.00 – 14.15 | **Introducing Design-thinking as Human-Centred Design:**  
**We introduce human-centred design as a design thinking approach and outline ways that educators can re-frame their mindsets. From empathy to growth to collaboration, by posing focused questions we encourage participants to explore the possibilities for human(learner)-centred design through reflecting on and developing and applying alternative mindsets and methods to educational challenges.** |                                                                                                                                                                                                       |
| 14.15 – 14.30 | **Immersion-Mindset and Method: Workshop Activity**  
**Working in groups, participants are given an educational issue to explore. Focusing on this issue, they are asked to apply human-centred design mindsets and methods to identify and frame a specific design challenge for their group.** |                                                                                                                                                                                                       |
| 14.30 – 15.00 | **Ideation-Mindset and Method: Workshop Activity**  
**Working in groups, participants focus on their specific design challenge, and are supported in applying different mindsets and methods to start to develop ideas, working in iterative ways from visualisation to rapid-prototyping.** |                                                                                                                                                                                                       |
| 15.00 – 15.20 | **Ideation-Mindset and Method: Workshop Activity**  
**Participants identify and work on their preferred ‘big’ idea.** |                                                                                                                                                                                                       |
| 15.20– 15.30 | **Ideation, Iteration, Infrastructure: Workshop Activity**  
**Working with a partner group, groups exchange their ‘big’ ideas. Each group tests and refines their partner group’s big idea, providing 2 or 3 key feedback points. Big ideas and feedback are returned to original groups.** |                                                                                                                                                                                                       |
| 15.30 – 15.45 | **Ideation, Iteration, Infrastructure and Sharing Ideas**  
**Working in groups, participants respond to partner group feedback to finalise their big idea. They describe their developed idea in no more than 50 words to create their ideas wonderwall entry.** |                                                                                                                                                                                                       |
| 16.45 – 17.00 | **Conclusions** |                                                                                                                                                                                                       |
Characteristics of Design Thinking

- creative-critical thinking
- opportunity & problem identification and solving
- team work and collaboration
- entrepreneurial and business acumen
- resilience
- flexibility and a ‘can do’ attitude
- self-confidence
- appreciation of and ability to plan
- using mistakes and criticism helpfully
- making ideas
- communication
Human(Learner)-Centred Design

Human-centred design is a creative approach to identifying and solving problems.

It is an approach to design thinking that starts with the people you are designing for and ends with new solutions that are focused on meeting their needs.

Human-centered design is uniquely situated to arrive at solutions that are desirable, feasible, and viable. By starting with humans, their hopes, fears, and needs, you can quickly uncover what’s most desirable.
Human(Learner)-Centred Design Process

- Human-centered design isn’t a linear process.
- It involves three main phases: **Inspiration**, **Ideation** and **Implementation**.
- By going through each phase in turn, the aim is to build deep understanding of the education communities and individuals you’re designing for, working out how to turn what you’ve learned into opportunities to design transformative solutions, building and testing your ideas before putting them out into the world.
Human-Centred Design Concepts

- **The Process**: suggested phases of design
- **Mindsets**: mental attitudes and approaches you can develop
- **Methods**: how you can go about each phase

IDEO method cards
https://www.ideo.com/post/method-cards
Learner-Centred Design Contexts

In your pack you will find a design context.

From this you will frame/identify an opportunity to transform educational practice through application of human-centred design thinking.

Contexts:

- Classroom spaces are traditional and fixed in layout and furniture
- Curriculum is compartmentalised into separate packages of content
- Assessments are disconnected from the learner and their holistic progression
- Local culture is not included in the curriculum
- Large class sizes are seen to support didactic teaching
- School development initiatives are not supported by local government and private sector agencies/industries
- Scheduling of classes is inflexible and restrictive
- Out of school visits and field trips are undervalued as learning experiences
INSPIRATION
In this phase, you’ll learn how to better understand people. You’ll observe their lives, hear their hopes and desires, and define your design area/challenge.

IDEATION
In this phase you’ll make sense of everything that you’ve heard and seen, you’ll generate lots of ideas, identify opportunities for design, and test and refine your solutions.

IMPLEMENTATION
This phase is your chance to bring your solution to life. You’ll work out how to get your idea to market and how to maximise its impact in the world.
**Methods**

17 Mindsets
19 Creative Confidence
20 Make It
21 Learn from Failure
22 **Empathy**
23 Embrace Ambiguity
24 Optimism
25 Iterate, Iterate, Iterate

**Inspiration**

29 Frame Your Design Challenge
31 Create a Project Plan
34 Build a Team
36 Recruiting Tools
37 Secondary Research
39 Interview
42 Group Interview
43 Expert Interview
44 Define Your Audience
45 Conversation Starters
49 Extremes and Mainstreams
52 Immersion
53 Analogous Inspiration
57 Card Sort
60 Peers Observing Peers
Empathy is the capacity to step into other people’s shoes, to understand their lives, and start to solve problems from their perspectives. Human-centered design is built on empathy, on the idea that the people you’re designing for will guide you to innovative solutions.

By putting ourselves in the shoes of the person we’re designing for, human-centered designers can start to see the world, and all the opportunities to improve it, through a new and powerful lens.
Immersing yourself in another world not only opens you up to new creative possibilities, but it allows you to leave behind preconceived ideas and outmoded ways of thinking.

Method Focus
IMMERSION

We have given you a design context. From this you will develop a specific design opportunity.
Let’s start inspiration by framing a **design opportunity**…

This should be short and easy to remember, a single sentence that conveys what you want to do.

We often do this by asking questions which set you and your team up to be solution-oriented and to generate lots of ideas along the way.
Q: What is the problem you are trying to solve?
   Classroom spaces are traditional and fixed in layout and furniture

Q: How might you frame this as a design question?
   How might we use class space to support learning in more creative ways?

Q: What is the ultimate impact you’re trying to have?

Q: What are possible solutions to your problem?

Q: What are some of the context and constraints you’re facing? (technological, geographical, institutional, time-based etc.)

Q: Does your original problem need tweaking? Try it again.
INSPIRATION
In this phase, you’ll learn how to better understand people. You’ll observe their lives, hear their hopes and desires, and define your design area/challenge.

IDEATION
In this phase you’ll make sense of everything that you’ve heard and seen, you’ll generate lots of ideas, identify opportunities for design, and test and refine your solutions.

IMPLEMENTATION
This phase is your chance to bring your solution to life. You’ll work out how to get your idea to market and how to maximise its impact in the world.
By going really **big** and **broad** during the Ideation phase, we dream up all kinds of possible solutions.

Because the aim is to have an impact in the world, we have to then identify what, among that big, broad range of ideas, has the **best shot** at **really working**.

You’ll **diverge** and **converge** a few times, and with each new cycle you’ll come closer and closer to a human-centred solution.
Mindsets

- Creative Confidence
- Make It
- Learn from Failure
- Empathy
- Embrace Ambiguity
- Optimism
- Iterate, Iterate, Iterate
Mindset Focus
CREATIVE CONFIDENCE

Creative confidence is the quality that human-centered designers rely on when it comes to making leaps, trusting their intuition, and chasing solutions that they haven’t totally figured out yet.

It’s the belief that you can and will come up with creative solutions to big human problems and the confidence that all it takes is to act. Creative confidence will drive you to make things, to test them out, to experience failure, but to keep on rolling, secure in the knowledge that you’ll get where you need to go and that you’re bound to innovate along the way.

It can take time to build creative confidence, and part of getting there is trusting that the human-centered design process will show you how to bring a creative approach to whatever problem is at hand.
Optimism is the embrace of possibility, the idea that even if we don’t know the answer, that it’s out there and that we can find it.

Optimism makes us more creative, encourages us to push on when we hit dead ends, and helps all the stakeholders in a project to work together.

Human-centered designers are persistently focused on what could be, not the countless obstacles that may get in the way.
<table>
<thead>
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<th>IDEATION METHODS</th>
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<tbody>
<tr>
<td>Download Your Learnings</td>
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<tr>
<td>Share Inspiring Stories</td>
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<tr>
<td>Top Five</td>
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<td>Find Themes</td>
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<td>Create Insight Statements</td>
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<td>Explore Your Hunch</td>
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<td>How Might We</td>
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<tr>
<td>Create Frameworks</td>
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<tr>
<td>Brainstorm</td>
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<td>Brainstorm Rules</td>
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<tr>
<td>Bundle Ideas</td>
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<tr>
<td>Get Visual</td>
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<tr>
<td>Mash-Ups</td>
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<td>Design Principles</td>
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<tr>
<td>Create a Concept</td>
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<td>Co-Creation Session</td>
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<tr>
<td>Gut Check</td>
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<td>Determine What to Prototype</td>
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<tr>
<td>Storyboard</td>
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<tr>
<td>Role Playing</td>
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<td>Rapid Prototyping</td>
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<td>Business Model Canvas</td>
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<td>Get Feedback</td>
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<td>Integrate Feedback and Iterate</td>
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Brainstorms are a way of recording collective thinking about a question, topic or idea. Brainstorms work best when the group is positive, optimistic, and focused on generating as many ideas as possible.

Energize your team and drum up a staggering amount of innovative ideas.
Incorporating drawing, sculpting, and building into the Ideation phase can unlock all kinds of innovative solutions.

Even though some people are naturally more visual and will express themselves easily through pictures, everyone can benefit from thinking visually.

Getting visual makes ideas more tangible, and helps clarify your thoughts for your team.
For human-centered designers, Rapid Prototyping is an incredibly effective way to make ideas tangible, to learn through making, and to quickly get key feedback from the people you’re designing for. Because prototypes are meant only to convey an idea—not to be perfect—you can quickly move through a variety of iterations, building on what you’ve learned from the people you’re designing for.
RE-DIRECTIONS!!!

Can you evidence that your idea will have a low impact on climate change and the environment?
Can you identify how learners and learning drive your idea?
How will you involve accredited providers, consultants or advisors to develop your idea?
Describe your idea

1 side of a postcard

50 words (max)

Pin to the wall

For example…
Stories from Scratch: Our idea is to design a learning experience where teachers and students work together to use speculation and story-making to create new memories and new interactions with our surroundings, thus developing new awareness of the relationship we hold with our school environment. (45 words)
Conclusions

#transformPEC2017
#PhEduCon2017
#AchievingKto12Goals
Clips, scissors, pens, and other reusable materials

So we can train more people and save the world!
Design thinking is a driver of visionary growth.
May the spirit of design thinking inspire you to make Christmas and always a celebration of transformative practice!