

Design Hacks: Flips and Tips for Pedagogic Innovation



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Presenters:
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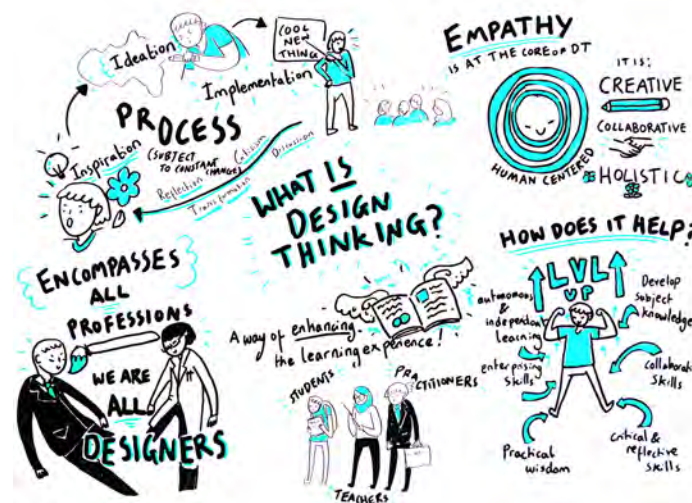


Image: Edie Woolf

Research project team: Emma Agusita, Marion Gillet, Nigel Newbutt, Michaela Palmer

Design Thinking as a Pedagogic Tool



Project aim: to explore how the use of *design thinking* might help to *innovate teaching and learning approaches* in a range of different subject areas at UWE Bristol (higher education).

Hypothesis: design thinking is a transversal learning methodology which enhances learning experiences...



Funded by UWE Bristol's Academic Practice Directorate


Context and Rationale

Design thinking – a human-centred, creative, collaborative and holistic approach to solving complex problems.

The way professional designers tackle problem solving is of value beyond the context of design but on a wider societal level, including within an educational context.

(Ritchie, 2017: 5)

“No problem can be solved by the same kind of thinking that created it” Albert Einstein



“Rapid technological and social change challenges the traditional pedagogic paradigm.
We need a new kind of education which demands the development of transversal skills such as the ability to think creatively and critically, take initiative, and work collaboratively”
(UNESCO, 2015).

It is argued that the use of Design thinking can support the development of:
Better content/subject knowledge; collaborative/metacognitive skills; critical/reflective practice;
Practical wisdom for citizenship; an enterprising mindset; autonomous/self-determining learning.
(Koh *et al*, 2015)

Benefits for both group and individual projects – active and engaged learning, employability skills
(Ritchie, 2014)






Research Approach:

A collaborative *design* process involving...

Educators, students, practitioners in generating ideas for pedagogic innovations.
Used DT approaches in subject specific and cross disciplinary teaching and learning.

Subject Areas: Education~ Media and Creative Technologies~ Business

4 project researchers; 7 Student co-designers; 22 Learners; 4 design educators/practitioners



Open Innovation Lab

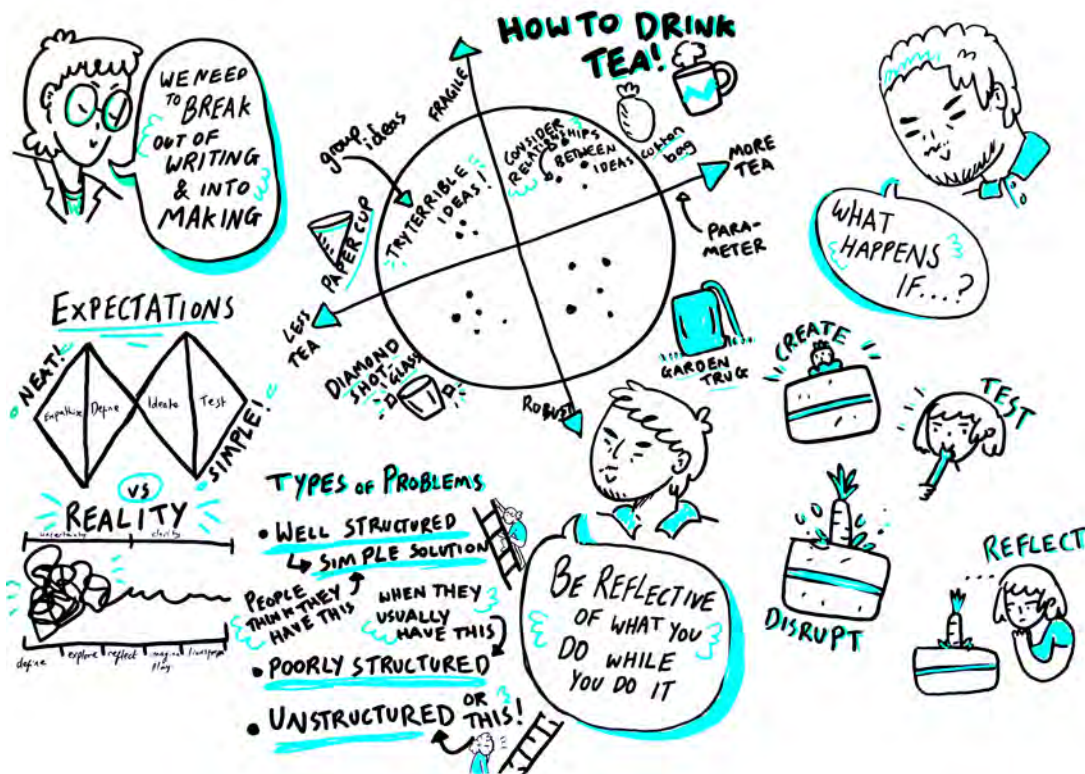
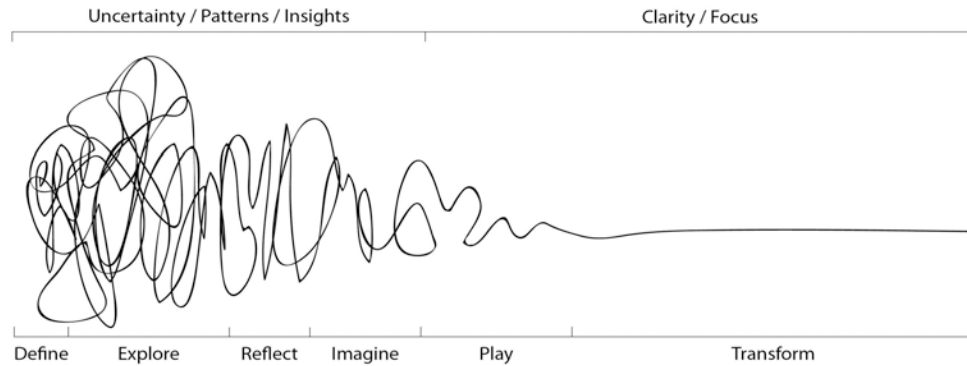


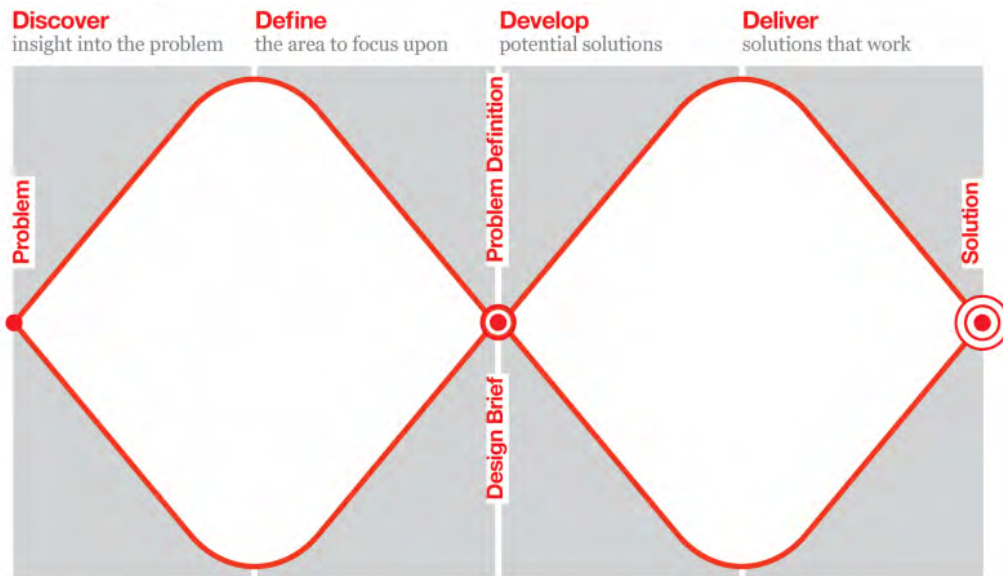
Image: Edie Woolf

- Exploring DT approaches and practices e.g. processes, skills, tools, actions, mindset.
- Collaborative research design workshop – generating ideas for teaching and learning approaches

The Design Squiggle (Newman - designsquiggle.com) Hasso-Plattner Institute of Design at Stanford (D-school)



We are all DESIGNERS!



British Design Council - Double Diamond (2005)

EVOLUTION 6²
Mindshake Design Thinking Model



© mindshake product | 2015

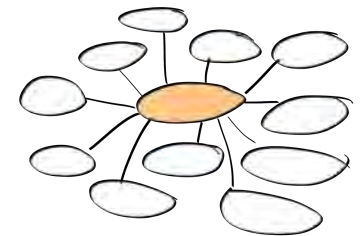
- mindshake
- brainstorm
- transformation
- rapid prototyping
- iteration
- idea selection
- sketchboard map
- image overlay
- persona map and cards
- empathy map
- mindboard
- idea factory map
- brainwriting
- insight clustering
- experimental drawing
- generative conversations
- analogies
- desktop walkthrough
- role play
- propaganda drawing
- rapid prototyping
- evolution matrix
- service blueprint
- pilot testing
- solution storyboard
- concept elaboration
- vision statement
- iteration progress
- presentation board
- visual business model
- information map
- digital media
- feedback map
- mindshake

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Mindshake Model - See Tchimmel (2015)

Visual and Sense Making Tools and Processes


E.g: Use of maps (inspiration and mind maps, brainwriting and clustering), matrices, infographics, storytelling (storyboards), prototyping, proposition drawing, analogies, personas, image/media interviews, walkthroughs and games.



Be creative and critical with the process...

Buzzword

A word or phrase which has become fashionable or popular, or sounds technical or important and is used to impress people.



Need for criticality, discernment and nuance in the way we frame, position and enact design thinking:
carefully considering the discourses that surround it and the context of its application.

"It's confusing... all the diagrams, for what it is, it's like 'here are the rules' but there are no rules. It's like a paradox, there are parameters but it's about liberating your thinking".

Design Hacks: Pedagogic Flips and Tips

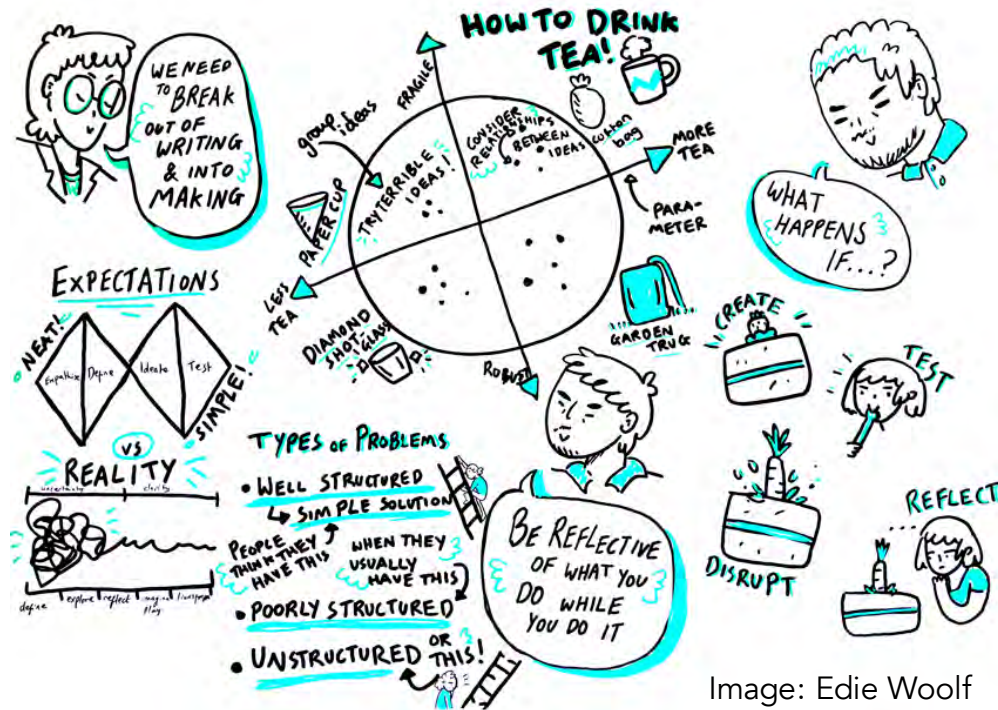



Image: Edie Woolf


Warm up



- *Think of something that poses a challenge
to your own learning?*
- 

Model it



- *Using one or more pipe cleaners create a representation of the challenge.*
- 

Explain/Reflect



- *Explain your model to the person next to you.*

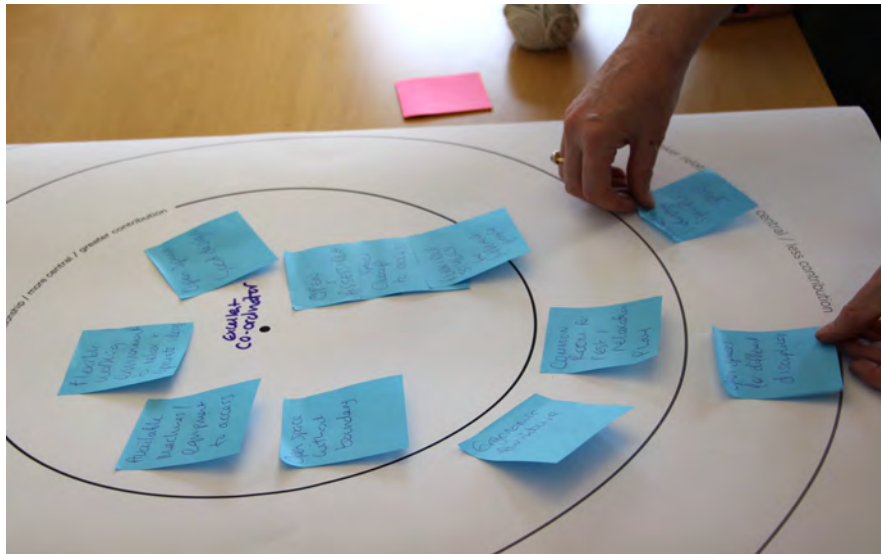
Tell them how it makes you feel.



Thoughts




Hacking learning spaces



Step 1: Think about learning spaces



- *What physical/material conditions and qualities make learning spaces suitable for collaborative & creative learning?*
 - *Record ideas on sticky notes*
- 

Step 2: Review your ideas




- *Review your notes/cluster ideas for creative and collaborative learning spaces*
 - *Identify key areas for innovation or improvement*
- 

Step 3: Explore/Prototype



- *The box represents a 'learning space'*
- *Use the box and materials to represent your chosen ideas*

*You'll be given a 'wild card' hack mid-process –
please apply this to one or more elements of your design...*



Flips & Tips

- *Think inside/outside/forwards/backwards*
 - *Invert/Reverse/Reframe*
 - *Pause/Reassemble*
 - *'Terrible Ideas'*
 - *Emotions*
 - *'Superpowers'...*



- *Storytell/Dramatise*
- *Sing it/Draw it/Model it*
(Comic/Collage/Quilt...)



Collaborative research design

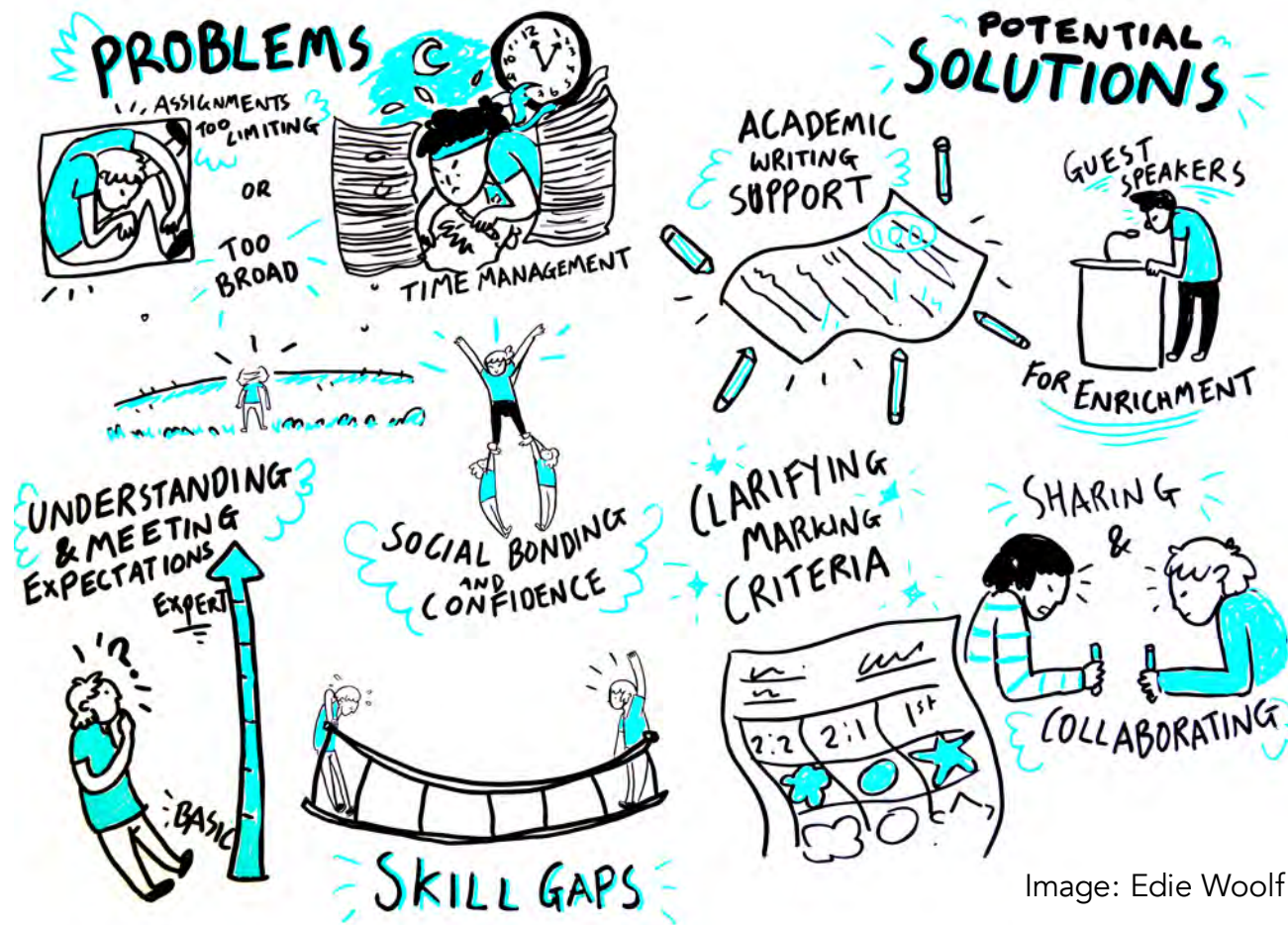
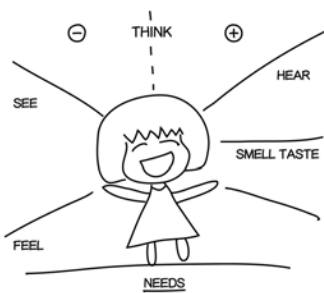
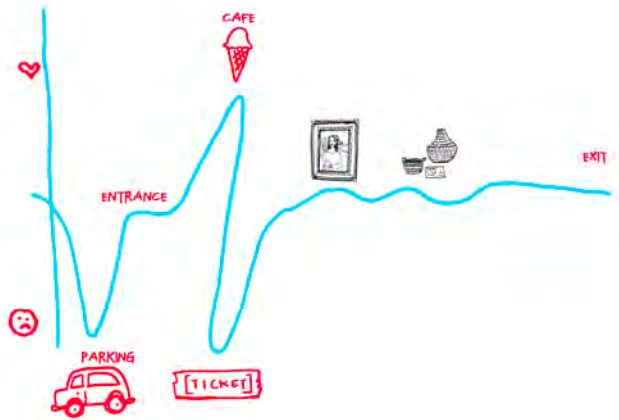


Image: Edie Woolf

Media/Culture: Co-production & Developing research project ideas

User Journey Map & Empathy Map



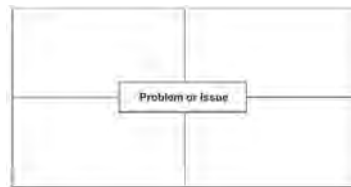
The Five Why's (project goals)



Conversation cards (questions for initial research)



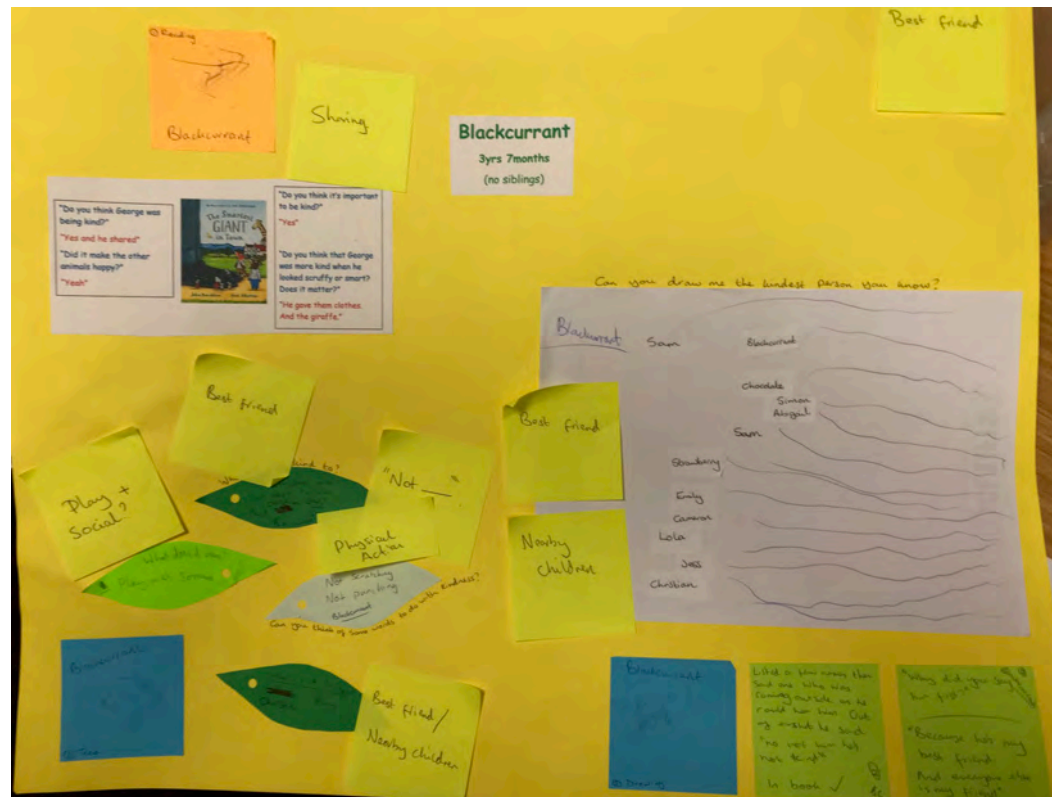
Reframing Matrix (different perspectives/questions)



prototyping methods

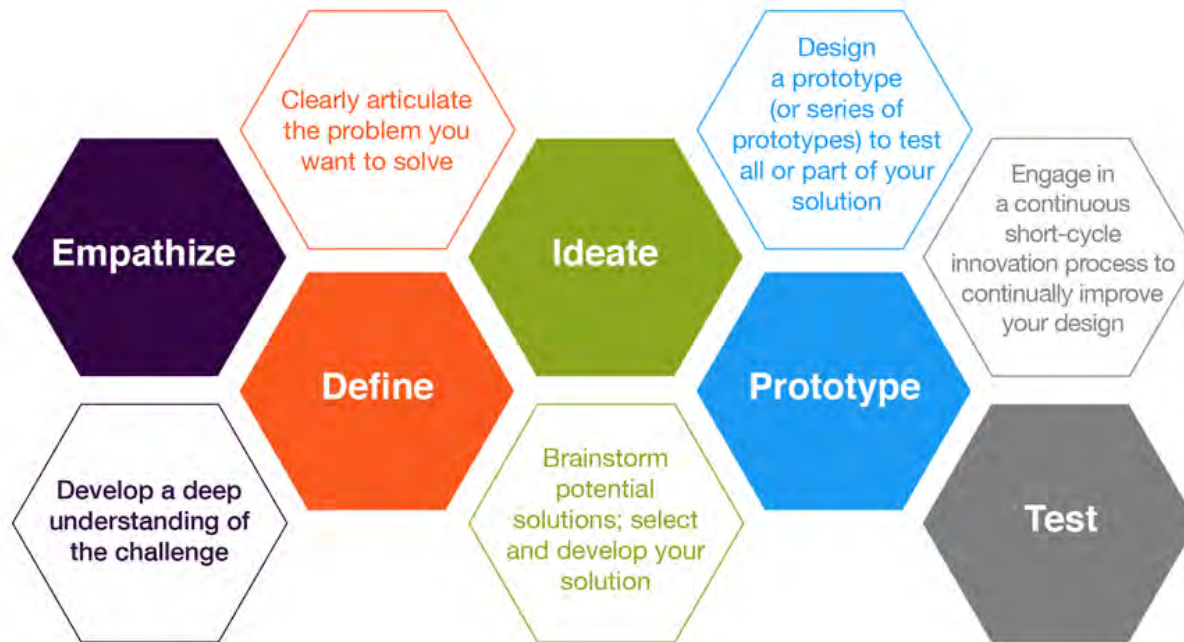


Education (Early Childhood): Dissertation Data Analysis



Team Entrepreneurship & Digital Media: Interdisciplinary collaboration

Creative Projects: late prototype stage



Findings: Learning benefits

- Enabling **clarity** (getting **unstuck**)
- Developing **confidence** and **resilience**
 - Encouraging **empathy**
- Allowing **freedom** to explore/encouraging **risk-taking**
 - **Collaboration** opportunities*
 - Developing ability to **self-reflect**
- Providing **experiential** quality to learning experience
 - Supports **self-directive** and **innovative** learning

*Well suited to small group learning (therefore question of **scale**) but..

“This type of thinking is not limited to working in a group” (individual learning benefits too)

“I think it’s useful if you’re unclear of the outcome you want or the route you want to take”.

“Good thing about the design squiggle – is being able to let go of an idea “

“It’s not just for designing, it’s about being able to be self-critical, accept feedback and challenge what you make/do. It’s not exclusive to design, it can be useful across all subjects”.

Pedagogical Insights

- Importance of **facilitation**
- Questions **power** dynamics
(less hierarchical/dogmatic)
- Opens up **interdisciplinary** opportunities
 - Develops pedagogic **skills**
 - Increases **accessibility**

Specific challenges/considerations:

- Resources (What to use?)
- Experience/Knowledge (How to use?)
 - Time/timing (When to use?)
- Place/Space/Environment (Where/how?)
 - Scalability

“Key: find the relevant thread, relating to the methods you need to teach.
Some design thinking methods won’t be
relevant for all subjects”.

What next? Pedagogic Resource

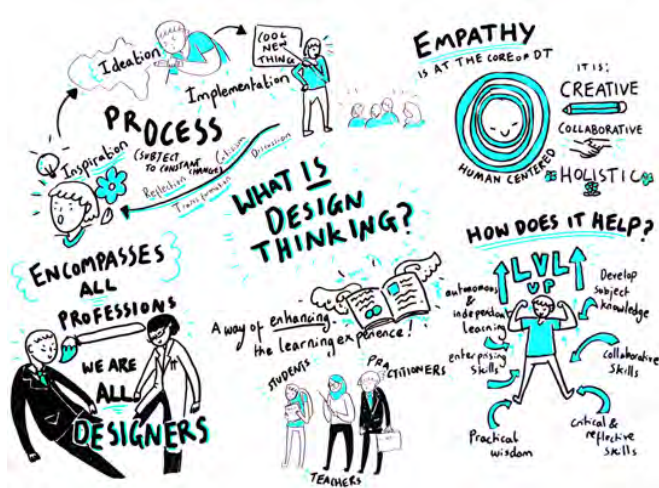


Image: Edie Woolf

- Case studies
- Lesson Plans
- Evaluation
- Hacks/Ideas
- Links to further resources

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